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Power Consumption: The Main Culprits

Identify The Biggest Guzzlers In Your Data Center

by John Brandon

WITH THE KNOWLEDGE that specific hardware inside the data center is responsible for the most power consumption, IT can start addressing consumption issues. In an economic downturn, this is important because while power usage was always a lower priority for most companies during the past two decades (at least, lower than other top concerns), it is now a new area of focus as a cost-cutting measure. It's also unclear who will be meeting our ever-increasing energy needs in the United States, as some Middle Eastern countries have announced that their oil exports will start to diminish rapidly in the next decade. And there's global warming and environmental concerns that are probably on the minds of IT administrators.

The problem is, even determining which hardware is consuming the most power can be expensive and time-consuming. Large utilities companies offer some tools and

analysis, and emerging energy virtualization and analysis tools can help you weed out energy inefficiencies. For the most part, these energy analysis options are sound and

make sense over the long term, but an additional approach is just knowing which hardware typically uses the most power and then putting a plan in place to deal with those heavy-use culprits.

Before we explain the top energy users in a data center, we should note that if your

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Tracking Your SME's Assets

Would You Notice A Missing Computer?

by Curt Harler

"**LOST: DELL LAPTOP.** Slate gray color. Last seen at Coffee Café. Answers to password 1234. Owner misses greatly. Reward."

Not all lost computers are wanted. In a survey conducted last fall by Absolute Software (www.absolute.com), 62% of respondents believe that missing computers at their companies have gone unnoticed. That's a sobering statistic considering the proprietary and personal information on every missing computer.

According to John Livingston, CEO of Absolute Software, by the end of last year, one in two computers sold was a notebook computer. SMEs are part of this trend, making them prime targets for opportunistic crooks, would-be identity thieves, and absent-minded employees.

"State data-breach laws have made SMEs responsible for making sure that the information on mobile computers is protected in the event a computer is lost or stolen," says Livingston. All businesses, regardless of size, need to make sure they know where their mobile computers are, as well as who is using them and must have plans in place should one go missing.

Given today's regulatory environment, it is imperative that companies of all sizes take a proactive approach to securing their mobile computers and the data on them. At a bare minimum, security specialists advise SMEs to establish policies around what information can be downloaded onto

portable computers and taken outside company facilities. Access to sensitive information, such as customer Social Security numbers, should be strictly limited to situations where that information is absolutely required.

"The only way to really make sure your computers are safe is to make sure they don't get stolen in the first place," says Eric Nelson, director of business development at technology consulting firm Alteritech (www.alteritech.com), admitting that concept is true "consultant-speak."

"The biggest issue for most SME IT managers is having an accurate, current

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[Companies of all sizes should take a proactive approach to securing their mobile computers and the data on them.]

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Power Issues

There's little doubt that power consumption is quickly becoming a top issue data centers need to worry about. But where do you begin?

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TECH & TRENDS

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In a survey conducted by Absolute Software, 62% of respondents believe that missing computers at their companies have gone unnoticed.

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While the discipline of risk management and mitigation is broad and highly specialized, there are some basic steps companies can take to characterize and improve their risk profiles.

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The virtualization hype train continues to blaze trails around the globe, with its conductor constantly proclaiming the virtues of the seemingly astonishing technology.

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Virtual worlds are going corporate as many enterprises realize they can leverage them to take their businesses in new directions.

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■ **Accellion** released the Accellion Managed File Transfer System for automated information transportation. ■ You don't have to give up functionality to pay a reasonable cost—that's

Addonics' philosophy with its new Storage Rack. ■ **Enhance Technology** announced the R4 and R8 MS Mini-SAS storage arrays. ■

Lancope announced the NetFlow Event Logging Gateway. ■ **Sherpa** announced Archive Attender for Exchange 3.2, which improves upon previous versions' PST archiving functionality and processing while reducing the time and cost of administration. ■ **Uniloc** announced StrongPoint, a device-based identity and access management appliance aimed at infrastructure security. ■ **Verari** announced its FOREST container solution, which functions as a portable data center. ■ **WatchGuard Technologies**

unveiled two new SSL VPN remote access appliances, the WatchGuard SSL 1000 and WatchGuard SSL 500. ■ **WildPackets** launched WatchPoint, a Web-based monitoring and reporting tool that gives IT managers and engineers complete visibility over highly complex and distributed networks.

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1. What is the size of your company (how many employees)?

- Less than 10
- 200 to 499
- 10 to 99
- 500 to 999
- 100 to 199
- 1,000+

2. How often do you purchase computer hardware/software?

- Weekly
- Quarterly
- Bi-weekly
- Annually
- Monthly
- No Involvement

3. What is your annual computer hardware/software purchasing budget?

- \$0 to \$9,999
- \$10,000 to \$24,999
- \$25,000 to \$49,999
- \$50,000 to \$99,999
- \$100,000 to \$249,999
- \$250,000 to \$499,999
- \$500,000 to \$999,000
- \$1,000,000+

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SECURITY

MARCH 21, 2008

Track Your Sensitive Data

**Discover Ways To Strengthen
The Protection Of Confidential Information**



KNOWING THE WEAK POINTS of your organization's security plan is crucial in order to strengthen existing policies and procedures. Reconnex's Data Loss Profiler will not only identify weak points, but it will also track the confidential and sensitive data leaving the network and note where it's going.

Data Loss Profiler will catalog and categorize all of the sensitive material leaving

the network, even if the content has not been previously protected. This is beneficial because some DLP (data loss prevention) solutions will rely solely on policies that currently exist, missing critical content. Thus, Data Loss Profiler ensures a thorough search of content for a more secure solution. Data Profiler can also detect data loss patterns from network interaction. It learns the

patterns, so you won't have to know about sensitive information in advance.

Because Data Loss Profiler catalogs and categorizes the comings and goings of all sensitive information, users can query the index to find out

where the information is coming from and who it's going to. With this information, organizations can strengthen their policies and procedures as necessary to avoid the loss of critical content. Organizations can also use the information for investigations into critical and sensitive data loss.

Data Loss Profiler was designed to work with Reconnex DLP solutions. Because of

its learning capabilities, however, it can also enhance legacy DLP products that do not utilize network traffic to discover weaknesses, strengthening policies and procedures associated with data loss.

Reconnex Data Loss Profiler

\$19,995

Helps organizations determine where sensitive information is going and where it came from to create better, more secure policies and procedures

www.reconnex.net

(866) 940-4590



SECURITY

MARCH 21, 2008

Secure Your Mobile Data

Sybase's Centralized Encryption Ensures Overall Protection

AS ORGANIZATIONS EXPAND global functionality through mobile devices, it's necessary to secure data without compromising user capabilities. In order for IT to encrypt sensitive information for mobile apps, enterprises must have a protective solution. Sybase iAnywhere offers new mobile encryption technology through Information Anywhere Suite Afaria.

Afaria is a Web-based console through which IT management can protect mobile devices—a single control center that functions on a browser and protects against online threats. Offering high scalability, it updates applications and data at any time, supervises individual users or groups, and minimizes user interaction.

Additionally, Afaria uses on-demand data decryption that allows for quick login



Using Sybase's Afaria, users can access temporary passwords for system recovery.

by the mobile worker. Seamless application integration protects confidential material while maintaining device compatibility. The temporary password recovery system enables users to make calls to the help desk from a locked phone.

Specific management components extend to critical areas of frontline business. Afaria Backup Manager archives documents and makes information available to headquarters and individuals to protect against stolen or lost data. The Inventory Manager scans and captures frontline hardware and software for troubleshooting and planning. Afaria Remote Control can be utilized by administrators for remote access and server support.

Afaria supports One-

Bridge and Microsoft push email. It can run on any mobile device, such as Windows Mobile, BlackBerry, Palm OS, and Symbian. Information Anywhere Suite's wireless connectivity is GPRS/EDGE/3G, WLAN, infrared, and Bluetooth.

Afaria is for enterprises looking to provide access to corporate data and applications to field workers. Sybase offers a free DVD trial for environment testing, including a virtual machine image and the Web-based console.

**Sybase iAnywhere Information
Anywhere Suite Afaria**

\$29 per seat

Web-based data encryption and security component for frontline mobile devices

(800) 792-2735

www.sybase.com

**SYBASE[®]
iAnywhere**

NETWORKING & VPN

MARCH 21, 2008

Cash From Trash

**Use Converge Asset Manager 2.0
To Track Your Assets Through The Disposal Process**

Converge Asset Manager 2.0											
Assets Disposal Report											
Total Assets	Request #	Recycle ID	Request Date	Converge Asset ID	Asset Type	Erasur	Asset Tag	Customer Reference	Location	Serial Number	Disposition
10425	1997	10122006	16253	Notebook	N		Demo001	9000 San Diego Ave, San Diego, CA, 92101, US	9000708R	Recycle	
10425	1997	10122006	20942	Monitor - CRT	N		Demo001	9000 San Diego Ave, San Diego, CA, 92101, US	900000070	Recycle	
10425	1997	10122006	2091	Monitor - CRT	N		Demo001	9000 San Diego Ave, San Diego, CA, 92101, US	JL73702773	Recycle	
10425	1997	10122006	2090	Monitor - CRT	N		Demo001	9000 San Diego Ave, San Diego, CA, 92101, US	801005492	Recycle	
10425	1997	10122006	2089	Monitor - CRT	N		Demo001	9000 San Diego Ave, San Diego, CA, 92101, US	9208AG03A1699	Recycle	
10425	1997	10122006	2088	Monitor - CRT	N		Demo001	9000 San Diego Ave, San Diego, CA, 92101, US	JL73702773	Recycle	

Converge Asset Manager 2.0 helps you plan ahead for proper (and profitable) asset disposal so it doesn't become a sporadic hassle.

DATA CENTERS CAN'T just throw anything away. Today there are regulatory concerns, recycling policies, and environmental impact issues regarding the disposal of IT and other assets.

And what comes off the books is as important as what goes on the books, speaking from an accounting point of view. Converge Asset Manager 2.0 is the latest version of the company's resource tracking software. A Web-based application, Asset Manager helps your data center evaluate the profit potential of shedding assets. It also opens up the possibility of reusing qualifying computers and electronics equipment through Converge's network.

Asset Manager gives you a bird's-eye view of your serial numbered assets, including the equipment's current step in the disposal process, through the new Chain-of-Custody Reporting feature. Discrepancies are flagged at the serial number level.

The software helps you analyze the security impact of getting rid of items with sensitive data and can generate a Certificate of Compliant Data Erasure showing a drive has been erased to DoD 5220.22M multipass standards.

Asset Manager 2.0 also helps your data center comply with environmental regulations. After final disposal of an asset that can't be resold, Converge can issue a Certificate of Compliant Recycling and Destruction and a Settlement Summary for your records.

Converge Asset Manager 2.0

Maintain security, comply with regulations, and even make some money while you get rid of your data center's unused assets

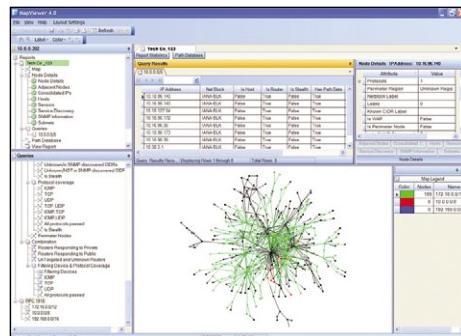
(800) 961-9270

www.converge.com

CONVERGE[®]

Network Balancing Act

IPsonar 4.0 Weighs Change With Security, Availability & Compliance



With the release of Lumeta's IPsonar 4.0, IT managers will be able to weigh network change against risk management and compliance requirements to have a clear sight into network connectivity and behavior.

Visual representations and mapped connectivity between the assets help IT find critical network information for managed and unmanaged assets.

sentations and mapping the connectivity between the assets. Simplicity, with the ability to scale large enterprises, boosts network environment understanding and network assurance.

The LNI (Lumeta Network Index) has been incorporated into IPsonar 4.0 to make an executive scorecard showing network risk, so IT can understand network risk and which factors play a role. The API feature has been opened to allow risk management and IT management life cycle solutions to incorporate with each other to use the discovery capabilities through existing risk management and network management tools.

The IPsonar MapViewer interface gives users a direct connection to IPsonar reports while allowing them to evaluate reports simultaneously. SMEs will be able to map network devices and information flows quickly and precisely.

Lumeta IPsonar 4.0

Starts at \$75,000

Helps organizations weigh network change against risk management and compliance requirements, providing a clear picture of network connectivity and behavior

(866) 586-3827

www.lumeta.com



More RAID Connectivity

Promise Technology's SuperTrak EX8658 & EX8654 Support SAS & SATA

WHEN IT COMES TO STORAGE, a data center needs all the scalability and flexibility it can get. To that end, there are two new SuperTrak EX SAS/SATA RAID controllers from Promise Technology. The SuperTrak EX8658 and EX8654 host-based controllers both provide a total of eight SAS/SATA ports with a 3Gbps signaling speed. However, the two cards differ in their port configurations. The SuperTrak EX8658's eight ports are all external, whereas the SuperTrak EX8654 splits its



complement into four internal and four external ports. They come in the low-profile MD2 form factor, perfect for Promise's 12- or 16-bay VTrak E-Class JBOD expansion enclosures.

With RAID 5 and 6 capabilities, database transactions and disk-to-disk backups are obvious applications for the newest members of the SuperTrak EX family. Promise is targeting the controllers at midrange and entry-level servers running Windows or popular flavors of Linux. Besides data center applications, Promise says that the new adapters are of interest for video post-production and capture applications.

The SuperTrak EX line shares a unified code base with Promise's other SuperTrak and VTrak products. This allows the company's WebPAM Pro management environment to give the user a single point of control over RAIDs wherever they reside on the network. Any storage attached to a SuperTrak EX controller or a VTrak E-Class RAID subsystem is accessible, and controllable, through WebPAM Pro.

Promise Technology SuperTrak EX8658 & EX8654

\$749 (same for both)

Add scalable SAS and SATA capacity to your data center with these centrally manageable RAID 5/6 host-based controllers

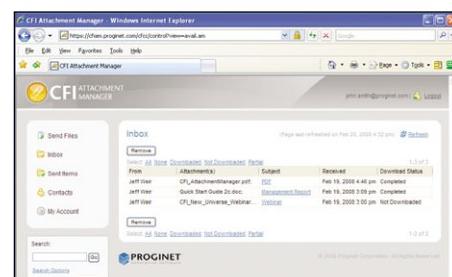
(408) 228-1400

www.promise.com



Give Your Mail Server A Break

Proginet's CFI Attachment Manager Eliminates Need For Size & Other Limits



The CFI Attachment Manager's interface makes exchanging email attachments safe and efficient.

MOST ORGANIZATIONS impose limits on email attachment and mailbox sizes to keep attachments from bogging down the email server. This practice does not leave an audit trail, fails to address security concerns, and results in important attachments being blocked or lost.

Proginet's CFI (CyberFusion Integration Suite) Attachment

Manager is a software-based email attachment manager that works as a Microsoft Outlook plug-in or through a standard Web browser to eliminate the need for attachment size restrictions and other limits. In short, Attachment Manager lets users send and receive emails attachments of any size. And it features an easy-to-use interface

that lets users exert greater control over their file transfers.

Proginet's offering creates logs and time stamps at every stage of the email's life cycle for compliance, e-discovery, and security purposes, and it automatically encrypts attachments for secure transfer. Administrators can monitor, control, and audit incoming and outgoing files. It supports archiving of attachments for up to an unlimited period of time and handles the resource-consuming attachments, reducing downtime and shortening backup and restore times.

Attachment Manager can be used as a standalone product or as an expansion module for other Proginet CFI products.

Proginet's CFI Attachment Manager

Pricing is available on a software license or subscription basis, starting at \$5,000

Works as a plug-in or through a Web browser to help users and administrators better manage email attachments

(516) 535-3600

www.proginet.com



Reach Out To Remote Systems

Raritan Dominion KSX II Offers New Management Features In A Streamlined Package

WHEN NETWORK PROBLEMS and server errors crop up, IT personnel must be able to rapidly diagnose and fix the problem. That means remote access and control is necessary, and security is a must.

Enter the Dominion KSX II remote access appliance. The new model brings together serial-over-IP, KVM-over-IP, and power management and houses them in a streamlined package. The Dominion KSX II is intended for secure, out-of-band control of servers, PBXs, routers, and switches in



branch offices and remote sites. It also supports virtual media file transfers to allow rollouts of updates and bug fixes.

Users have BIOS-level access to remote systems, right down to being able to reboot a server or restart a switch. (Some power monitoring and cycling requires Raritan's

Dominion PX power strips.) A browser-based HTML GUI offers a top-down look at the equipment under the unit's control.

All of the Dominion KSX II's communications are protected with 256-bit AES and integrated authentication. It also supports strong passwords and locks out users after a number of failed logon attempts.

Another key feature is Absolute Mouse Synchronization, which maintains the remote user's mouse settings no matter which server is being controlled. The Dominion KSX II is CommandCenter-certified, so multiple units (and connected hardware) can be commanded from one IP address. That's a big help to organizations with far-flung resources.

Should the network fail, the Dominion KSX II offers a built-in modem with dial-

back capability. The appliance works with AAA servers, as well as SNMP and Syslog event management systems.

The KSX2-144 includes four KVM, four serial, and two power control ports; the KSX2-188 has eight KVM, eight serial, and two power control ports.

Raritan Dominion KSX II

KSX2-144: \$1,999; KSX2-188: \$2,499

Remote access appliance with serial-over-IP, KVM-over-IP, virtual media, and power management features

(800) 724-8090

www.raritan.com



MarketPlace



NEWS



After EC Approval, Google Completes DoubleClick Deal

FOLLOWING THE APPROVAL of the European Commission, Google announced that it has completed its acquisition of online advertising firm DoubleClick for \$3.1 billion. Industry analysts were not surprised that the commission approved the merger, but some were surprised that it didn't impose any conditions on the deal. The commission did remind the two companies that they are obligated to respect the privacy of personal data. Google's CEO and Chairman Eric Schmidt announced that the merger may result in some job cuts, although he didn't specify how many.

Letter Questions Progress On H-1B

THE H-1B PROGRAM is in need of better oversight and enforcement from the U.S. Department Of Homeland Security, according to U.S. Senator Chuck Grassley from Iowa. In a letter to Homeland Security Secretary Michael Chertoff, Grassley urged Chertoff to make good on his promises to reform and improve the current immigration system, including the H-1B visa program. Grassley says he has yet to see progress on the issue, citing that most H-1B visas are going to foreign-based companies. "U.S. businesses that need highly skilled workers are getting the short end of the stick," Grassley says.

HP Tops PC Market Share In Q4

THE FOURTH QUARTER was a good one for top-tier U.S. PC brands, with HP, Dell, and Apple all posting gains for the period, according to research company iSuppli. During the quarter, HP held its lead in the worldwide marketplace, with PC shipments growing 25.5% to 14.6 million units, compared to 11.6 million units during the same quarter in 2006. Despite Dell's fall from No. 1 in 2006, the company is beginning to recover, with Q4 shipments up 11.3 million units, or 17.4%, compared to the same period a year prior. Apple has also posted increases in shipments; the company's fourth-quarter growth was 39.3% compared to Q4 the previous year.

Microsoft Challenges "Vista-Capable" Lawsuit

IN RESPONSE TO A JUDGE'S DECISION to grant class-action status to a lawsuit against

WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 15 major companies in the technology market.

Company	Symbol	Year Ago	March 5 \$	March 12 \$	% change from previous week
BEA Systems	BEAS	\$11.05	\$19.11	\$19.07	▼ 0.21%
Computer Associates	CA	\$25.72	\$22.90	\$22.73	▼ 0.74%
Cisco Systems	CSCO	\$26.17	\$24.27	\$25.14	▲ 3.58%
Dell	DELL	\$22.35	\$19.79	\$19.69	▼ 0.51%
Electronic Data Systems	EDS	\$27.64	\$17.17	\$16.56	▼ 3.55%
Google	GOOG	\$454.75	\$447.70	\$440.18	▼ 1.68%
HP	HPQ	\$40.37	\$48.31	\$47.27	▼ 2.15%
IBM	IBM	\$94.11	\$115.39	\$117.07	▲ 1.46%
Intel	INTC	\$19.48	\$20.20	\$21.12	▲ 4.55%
McAfee	MFE	\$30.27	\$33.69	\$34.37	▲ 2.02%
Microsoft	MSFT	\$27.44	\$28.12	\$28.63	▲ 1.81%
Oracle	ORCL	\$17.07	\$18.80	\$19.68	▲ 4.68%
Red Hat Software	RHT	\$22.94	\$17.70	\$17.15	▼ 3.11%
Sun Microsystems	JAVAD	\$6.31	\$16.46	\$16.96	▲ 3.04%
Symantec	SYMC	\$17.01	\$17.02	\$17.20	▲ 1.06%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

are Safari with 5.7%, Opera with 0.69%, and Netscape with 0.68%.

Number Of Computer Science Graduates Drops

ABOUT 8,021 STUDENTS graduated with degrees in computer science last year, down about 43% since its most recent high in 2004, according to the CRA (Computing Research Association). The association also notes that the number of new students declaring computer science as their major has been cut in half since 2000. Overall enrollments in computer science programs have seen a similar decline, down about 49% since a high in the 2001/2002 academic year. A slight rise in new computer science majors from 2006 to 2007, however, might indicate the interest in computer science is stabilizing, according to the CRA.

VeriSign: 33 Million Domain Names Added Last Year

ACCORDING TO DIGITAL infrastructure vendor VeriSign, about 33 million new domain names were added to the Internet last year, bringing the total number of registrations worldwide to more than 153 million. The growth represents a 27% increase in domain names compared to the same quarter in 2006 and a 5% increase compared to the third quarter last year. During Q4, the VeriSign report said, new registrations for .com and .net domain names averaged 2.5 million per month, totaling 7.5 million new registrations during the quarter.

Stolen Laptop Contained Children's Health Records

THE TELFORD AND WREKIN PCT (Primary Care Trust) in the UK reported that a laptop containing names, birth dates, and addresses, as well as language and speech therapy treatment, of 238 children who are PCT patients was stolen from the Madeley Health Centre. One of the health center's therapists was holding a clinic and had left the notebook in a nearby room. Telford and Wrekin's CEO said in a statement that the notebook had contained encryption software to comply with security regulations, and it is no longer connected to the network.

Ask.com To Undergo Changes

INTERNET SEARCH ENGINE ASK.COM is moving forward with a makeover that will result in the company laying off about 40 employees, which is about 8% of its workforce. Instead of continuing its quest to compete with Google, Ask.com will focus on a smaller, specific market of married women, primarily located in the South and Midwest. According to comScore Media Metrix, Ask.com ranked fifth among U.S. search engines with a 4.5% market share, compared to Google's 58.5% share, through January. Ask.com CEO Jim Safka has said that he believes the changes will breathe new life into the search engine.

Brothers Sentenced For Software Piracy

THE U.S. DEPARTMENT OF JUSTICE announced two brothers have been sentenced to serve prison time for selling "massive" amounts of pirated software over the Internet. Maurice Robberson will pay \$855,917 in restitution and serve three years in prison, while Thomas Robberson will pay \$151,488 in restitution and serve 30 months. In November, both brothers pled guilty to felony copyright infringement for selling counterfeit software from Macromedia, Adobe Systems, and Autodesk from late 2002 through October 2005. In that time period, Maurice Robberson grossed more than \$855,000 selling software worth nearly \$5.6 million in retail value; Thomas Robberson grossed \$150,000 for software worth almost \$1 million.

Upcoming IT Events

- MARCH -

Boston SecureWorld Expo
March 26-27
Boston, Mass.
www.secureworldexpo.com

Data Center World
March 30-April 3
Las Vegas, Nev.
www.afcom.com

- APRIL -

FOSE
April 1-3
Washington, D.C.
www.fose.com

Gartner Business Intelligence Summit
April 1-3
Chicago, Ill.
www.gartner.com/it/summits/bi6/index.jsp

Gartner Symposium/ITxpo
April 6-10
Las Vegas, Nev.
www.gartner.com/it/sym/2008/spg10/spg10.jsp

RSA Conference
April 7-11
San Francisco, Calif.
www.rsaconference.com/2008/US/home.aspx

- ASCDI Spring

April 9-12
Key West, Fla.
www.ascdi.com

ITEC Miami
April 16-17
Miami, Fla.
www.goitec.com

Houston SecureWorld Expo
April 23-24
Houston, Texas
www.secureworldexpo.com

Interop Las Vegas
April 27-May 2
Las Vegas, Nev.
www.interop.com

Atlanta SecureWorld Expo
April 29-30
Atlanta, Ga.
www.secureworldexpo.com

- MAY -

ITEC Houston
May 7-8
Houston, Texas
www.goitec.com

Philadelphia SecureWorld Expo
May 7-8
Philadelphia, Pa.
www.secureworldexpo.com

Gartner Outsourcing & Vendor Management Summit
May 19-21
Washington, D.C.
www.gartner.com/it/page.jsp?id=597509

Chicago SecureWorld Expo
May 21-22
Chicago, Ill.
www.secureworldexpo.com

ITEC Detroit
May 21-22
Detroit, Mich.
www.goitec.com

ITEC St. Louis
May 27-28
St. Louis, Mo.
www.goitec.com

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Speed Up Server Performance

Alacritech's Scalable Network Accelerators Spell Relief For Overloaded File Servers

by Sue Hildreth

• • •

AS ANY NETWORK ADMINISTRATOR knows, uploading and downloading large files from one server to another can eat up a lot of processing power. And if many files are being transferred back and forth on a continuous basis, that can reduce the capacity available for other applications residing on the server.

Stargate Digital (www.stargatefilms.com), a London-, Vancouver-, and Los Angeles-based company that provides visual effects for motion pictures and television shows, deals daily in large files. Its staff of artists and production people work with digitized shots, converted from 35mm film, and create 3D objects and animations. Finished images are rendered at high resolution by one of 26 rendering computers and sent on to a network server. After final edits, it sends the finished video back to the client company, either electronically or on a tape.

In the film industry, speed is critical, says Dr. Joseph Meier, CTO of Stargate. So even a small delay can be a cause for concern. But so many large files being processed and transferred from server to server naturally created some delays in the servers and on the network. "The artists and staff members often complained about slow network speeds," says Meier.

That was a little over two years ago, when Meier and the IT staff realized that the large amount of file serving was affecting how other applications ran and, in some cases, was slowing the production process. "We realized our CPUs were spending an inordinate amount of time processing TCP/IP requests instead of serving up images," says Meier. "Each of these files is from 8 to 20MB in size, and that's just one frame. There are 24 or 30 frames per second in a television or film shoot. If you multiply that by the 15 or 16 television shows we do every week, plus other movie or television films and commercials, it adds up."

In Search Of A Solution

After reading an article on TCP offload technology, Meier decided to see what improvement he could get by adding a network accelerator card equipped with a TCP offload engine. He contacted Alacritech (www.alacritech.com), a company headquartered in San Jose, Calif., which



sent him a sample card to try in the Stargate network.

Alacritech's family of SNA (Scalable Network Accelerator) cards uses Alacritech's own Dynamic TCP Offload Technology to speed server performance by moving the network processing tasks off of the host CPU on to the network card. TCP offload engines—which several vendors, including Alacritech, sell—take over the TCP/IP file routing traffic so that the server CPU can more efficiently process applications and render graphics. By having, essentially, a co-processor card handle the file serving, the CPU doesn't have to interrupt application tasks to process TCP/IP requests.

Accelerator cards are usually put in place of the NIC (network interface card) that connects the server to the IP network. Because they are equipped with custom ASICs (application-specific integrated circuits), accelerator cards tend to be more efficient in processing volumes of file transfer requests.

"In a traditional computer with a standard NIC, the CPU does all the processing. But with these offload engines, that information is put into the silicon [of the accelerator card]. So the server CPU only has to serve up the file and let the offload engine figure out where it's got to go," explains Meier.

When Are Accelerator Cards Worth The Cost?

Accelerator cards aren't inexpensive. Meier says he has paid as much as \$1,000 each to equip nine of the company's file servers with Alacritech accelerator cards, although often he can get them for less from a discount retailer. Alacritech says its pricing ranges from \$449 for a single-port, PCI-X copper SNA accelerator up to \$3,499 for a 4-port, PCI-E Fiber SNA accelerator.

Given that price tag, accelerator cards aren't necessarily a good investment for every organization. In some cases, upgrading the server hardware may be a better bet. Meier has a few suggestions for anyone considering the purchase of an accelerator card.

First, optimize other parts of the network and server hardware before adding accelerator cards. Often, you can do a number of tweaks to increase response time, and accelerator cards probably shouldn't be your very first option, says Meier. "If your switch is overloaded, or if it's not wire speed, then it's a question as to whether these cards will give you a bang for your buck," he says.

Meier did make several enhancements to Stargate's network before investing in the Alacritech cards. "We've switched from Ultra SCSI to Fibre Channel and made all of our storage direct-attached so our render farm has direct access to the high-resolution image files," says Meier. "We upgraded the backbone of the network and added a 10Gb Ethernet switch."

But with terabytes of graphics files being accessed and processed and transferred from server to server, even these improvements couldn't keep up. Response times were still slower than desired. In that case, the accelerator card was a needed addition.

He also recommends checking that the accelerator card you choose supports your operating system. Alacritech currently supports only Microsoft platforms, including WinXP, Windows Vista, and Windows Server 2003. But the company says it is considering adding Linux support in the future.

Meier, for one, would appreciate the addition of Linux support due to the rising cost of Microsoft licenses. He plans to migrate his file servers to Linux, mainly to save on license fees. "Microsoft is raising prices on its server operating system and client access licenses. We're doing mainly file serving, so it's not worth it to have all our servers on Microsoft," he says.

Give It A Try

You should also test the card in your network to see how it performs. Networks and servers have a million variables that can affect the response times, and accelerator cards may or may not provide the speed boost the vendor claims in different environments. So prospective buyers would be well-advised to ask for a trial model to see if they get the speed enhancements they expect. Alacritech, for instance, will send out products to prospective customers interested in trying them in their own environments.

In Meier's initial trial of the Alacritech cards, he found speed increases from 10 to 15%, which is about what Stargate is getting today from the nine cards, both fiber-optic and copper-based, that it has installed to date. Alacritech says many customers report as much as 35% improvement in response time. But Meier is happy with 10%, given how important even small improvements in speed are to his business.

"We've always tried to wring every bit of speed from the network. If you're mostly working with Word documents or Excel spreadsheets, then you may not see an ROI," says Meier. "But in an industry such as ours, which is all about the fast movement of large files, we have a very real need for them [Alacritech Scalable Network Accelerator cards]."

Alacritech Scalable Network Accelerators

Move TCP/IP processing off the server CPU to allow servers to perform more efficiently and provide better response time in application performance

"If you're mostly working with Word documents or Excel spreadsheets, then you may not see an ROI," says Dr. Joseph Meier, CTO of Stargate Digital (www.stargatefilms.com). "But in an industry such as ours, which is all about the fast movement of large files, we have a very real need for them [Alacritech Scalable Network Accelerator cards]."

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www.alacritech.com

PHYSICAL INFRASTRUCTURE

FEBRUARY 1, 2008

Simpler Installation Of Underfloor Cabling

Panduit's GridRunner System Improves Cable Routing

INCORPORATING A CABLE-ROUTING system into an organization's existing infrastructure can be a costly and time-consuming process. However, with the right system that is both adaptable and easy to install, routing data and power cables under a raised floor does not have to be a tremendous drain on a company's time and resources. Panduit has released a new series of products that make cable routing quick and convenient.

Panduit's GridRunner system includes preassembled mounting brackets that make

installation time-effective and ensure a company's new underfloor cable-routing system can get up and running in a minimal amount of time.

By providing the brackets, Panduit also helps companies reduce the cost of implementing the routing system.

The modular system consists of a series of wire baskets that make up the cable pathway; the drop-in wire basket sections make setup simple. When combined with the pre-



assembled mounting brackets, there is no need to cut components to fit. The entire system is designed to assemble and install quickly.

The wire baskets also provide another advantage: With the open nature of the wire basket, air travels freely through this component to reduce the likelihood of overheating.

Panduit put a lot of thought into the design of the GridRunner components, and the parts do not damage cables due to poor design. The GridRunner parts have rounded edges and bend-radius control corners. Panduit has also used a bonding feature that electrically connects all components and provides electrical protection.

Because GridRunner is a series of individual parts, a company can combine drop-in wire baskets and preassembled mounting brackets in a way that makes sense for the company's IT infrastructure.

Panduit GridRunner Underfloor Cable Routing System

A modular underfloor cable-routing system that uses a series of drop-in wire baskets and preassembled brackets

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Email Archiving

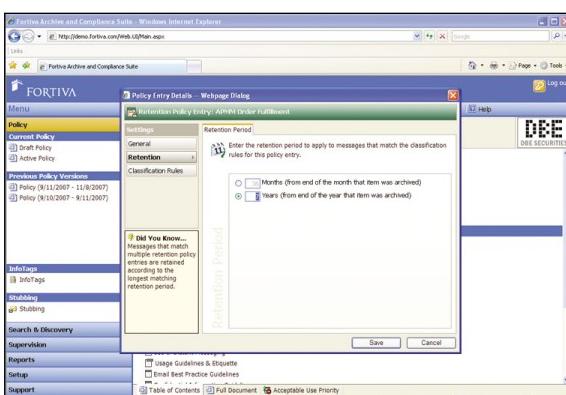
Fortiva's SmartStore Helps You Meet FRCP Requirements

FORTIVA SMARTSTORE ARCHIVE

helps you meet the demands of the Federal Rules of Civil Procedure without adding additional infrastructure or IT staff. This SaaS (software as a service) package gives you the ability to archive all email in a central location, enforce policies and litigation holds, perform enterprise searches, and conduct early case assessment. Perhaps best of all,

Fortiva claims that you'll get this functionality for the same or less than the cost of storing and managing the data on enterprise storage in-house. As an additional benefit, SmartStore's stubbing feature can help to reduce the demands on Exchange, thereby improving email storage management.

Because the penalties for failing to enforce a consistent retention policy or being unprepared to produce email in a timely fashion can be quite stiff, having effective search and retrieval capabilities is a top priority for many businesses. To help meet these requirements, SmartStore gives customers access to sophisticated search tools without the cost of maintaining the servers required for enterprise-grade



Fortiva SmartStore lets you customize retention policies to comply with various regulations.

search in-house. Should your company need access to real-time search for more intensive e-discovery requirements, you can upgrade SmartStore archive to the full Fortiva Archiving Suite at any time.

Fortiva SmartStore

Starts at \$1.10 per user, per month for a 1,000-user company

Gives companies the ability to archive email, comply with federal regulations, and meet discovery requests for a reasonable price

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www.fortiva.com



An Intelligent Switch

ConSentry LANShield Features Programmable Hardware, Deep Packet Inspection Processor

SWITCHES BASED ON legacy architecture may provide the speed your network needs, but because legacy switches typically use architecture that relies on IP addresses, Layer 3/4 ports, virtual LANs, and access control lists, your IT staff must create and maintain a number of local security policies. ConSentry's Intelligent Switching architecture lets switches reference central directory stores, such as Active Directory, to control authentication and user management and track activity based on user and application roles.

ConSentry's LANShield Switch provides a platform to implement the Intelligent Switching architecture. LANShield features application-based QoS at Layer 7; greater control of Web-based application and instant messaging; and LAN visibility



by user, role, server, and file. The LANShield Switch can protect against MAC spoofing and avoid static IP address mapping of Web destinations. The LANShield's embedded application visibility lets it recognize a number of types of data, including file names, Web addresses, and FTP file transfers. The dynamic control of both users and applications helps you roll out LAN services and optimize application performance over the network without reducing network security.

What makes the Intelligent Switch architecture different from legacy switches? For starters, Intelligent Switch hardware is programmable, so you can tell the switch to utilize role-based policies, such as for certified users or specific groups of users, to alleviate the need for IT staff to create and maintain virtual LANs and access control lists. The Intelligent Switch architecture also includes a deep packet inspection processor that can identify applications at Layer 7, rather than just by port number. For each traffic flow, the LANShield Switch identifies the application in use, applies policies based on role, and tracks all activities.

ConSentry LANShield Switch

Starts at \$6,995; LANShield OS available as a free upgrade to ConSentry customers with current support contract

Uses ConSentry's Intelligent Switch architecture to provide integrated user authentication and wire-speed switching on your network

(408) 956-2100

www.consentry.com



Keep Tabs On Your Assets

RF Code System Tracks Rack-Level Equipment In Real Time

COMPANIES NO LONGER NEED to incur the high expenses associated with manually tracking a company's data center inventory. A new system from RF Code makes data center asset inventory nearly automatic. Not only does this system save time and money, but it also helps companies ensure compliance with regulations.

The three products in the system—the R100 Asset Tag, R200 Active RFID Rack Reader, and Zone Manager software—together create an automated inventory system that lets IT personnel perform real-time monitoring of rack-level assets. By implementing this system, a company can identify the location of any of its assets at any time.

What makes RF Code's system different than other asset-tracking systems is that it updates inventory data every few seconds. In contrast, a traditional hardware-based inventory system requires that individual items are tagged or bar-coded and then scanned manually during inventory procedures. Traditional software-based inventory systems can only keep track of those servers that are plugged in and in their original locations.



The R100 Asset Tag has an industrial-strength adhesive backing to secure it to a standard U-mounted rack asset.

Once the R100 Asset Tags are mounted in a rack, they transmit signals that are received by the R200 Active RFID Rack Reader. The rack reader then reports the data it receives to the RF Code Zone Manager software, which can show the designated zones and the RFID tags in each zone. If a data center asset is installed or removed, or if its location changes, Zone Manager immediately alerts staff.

RF Code Asset Tracking System

Consists of three parts: R100 Active RFID Tags (\$18.50 per tag), R200 Rack Reader (\$995), and Zone Manager Software (price based on number of racks and tagged servers)

Uses software, asset tags, and an RFID reader to automatically track rack-level items for up-to-date inventory of data center assets

(877) 969-2828

www.rfcode.com



Scalable Online Backup

MozyEnterprise Offers Seamless Integration Into Existing Infrastructure



The Dashboard view provides a simplified yet informative snapshot of the backup.

EMC'S NEW MozyEnterprise, an automated offsite backup service for desktops, laptops, and remote Windows servers, is based on Berkeley Data Systems' MozyHome and MozyPro backup solutions, designed for consumers and small businesses. Users can purchase, deploy, manage, and meter MozyEnterprise through the EMC Fortress SaaS delivery platform.

EMC MozyEnterprise

\$5.25 per month per desktop or laptop plus 70 cents per month per gigabyte; \$9.25 per month per Windows server plus \$2.35 per month per gigabyte

Automates online backup and recovery for desktops, notebooks, and Windows servers

(866) 464-7381

www.emc.com



MozyEnterprise features a stripped-down interface that makes configuring backups and schedules simple. The service comes with preconfigured backup sets that snag and save the most common file types. Advanced users can take the reins and edit the backup sets. The offering also lets users choose how to perform restores.

MozyEnterprise's security features include 448-bit Blowfish and 128-bit SSL data encryption during file storage and transfers, user-configurable private encryption key options, and near continuous data protection with backups of new and changed files every two hours. EMC also equipped it with RSA's secure access management and management features.

MozyEnterprise's data backups are locked tightly, with constant onsite monitoring and protective systems that keep your valuable data safe from damage by fire, power outages, and even earthquakes.

Access At The Rack

Chatsworth's LCD/KVM Console Provides Easy Access To Up To 16 Computers

AS A BUSINESS GROWS, IT resources must grow, too. By adding additional computers and other hardware, however, space tends to become more constrained. To help companies save valuable rack space without sacrificing functionality, Chatsworth Products created the new LCD/KVM Console. This console provides easy access to multiple rackmount peripherals, and it requires only 1RMU of rackmount space.

Chatsworth's LCD/KVM Console comes in single-, 8-, or 16-port versions and provides access to multiple computers using a set of rackmount peripherals. Multicomputer units come with a KVM switch. The console comes with a 15-, 17-, or 19-inch LCD capable of displaying resolutions of up to 1,280 x 1,024 SXGA. A tempered glass panel protects the display.



This 19-inch EIA rackmount shelf combines the LCD panel, a 106-key keyboard with numeric pad, and a built-in touchpad. The LCD/KVM Console connects to computers with PS/2 or USB keyboard and mouse connections using a single cable connection. Supported OSes include DOS, Windows, HP Unix, Linux, Novell 3.12-6, and Sun.

For increased ease of use and manageability, the Chatsworth console has built-in dual slides that let the LCD and the keyboard tray open independently. A keyed lock secures the console in the closed position when not in use. The KVM switch offers an on-screen display menu and password protection. With the KVM switch, users can search for computers by name or by using hotkey controls such as auto scan.

The console comes with an internal universal power supply with a connector for international use and a power cord with NEMA 5-15P plug.

Chatsworth Products LCD/KVM Console

Starts at about \$2,085

Combines an LCD, a 106-key keyboard, and a touchpad into a single unit that can connect up to 16 computers

(800) 834-4969

www.chatsworth.com



CHATSWORTH
PRODUCTS, INC.

Give Users More Control

Ensim Unify Enterprise Edition 1.5 Improves System Management Routines

SOMETIMES THE BEST WAY to increase the productivity of employees is to give those employees self-service tools that offer more administrative rights for basic tasks, such as managing distribution lists and resetting passwords.

Ensim's Unify Enterprise 1.5 system management software provides such capabilities. It lets enterprises quickly perform change requests within a unified communications infrastructure and automate the provisioning of users, applications, and devices, all of which results in reduced errors and administrative costs, the quicker turnaround of setting up new users.

This upgrade of Unify Enterprise supports Windows Mobile and BlackBerry

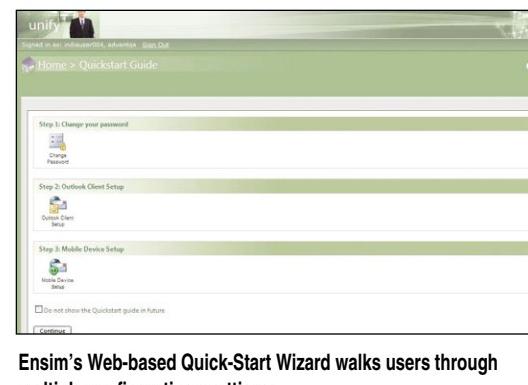
Unify Enterprise Edition 1.5

\$20 per user annually (maintenance included); \$39 perpetual license (maintenance separate); free trial available.

System management software that features a quick-start configuration wizard, enhanced Web services API, and template-based interface

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Ensim's Web-based Quick-Start Wizard walks users through multiple configurations settings.

devices and Microsoft Active Directory 2003, Microsoft Exchange 2003/2007, and BlackBerry Enterprise Server.

The template-based interface and Web-based Quick-Start Wizard walk administrators through post-installation configuration and walk employees through self-configuration options. Edition 1.5 also lets administrators set default groups for users; lock down user templates; manage user attributes; and transfer user accounts.

Additional features include a Web-based interface that offers customization and management control over administration rights based on each administrator's role. Systems admins can configure the software based on business policies. Edition 1.5 also includes an enhanced Web services API to execute integration with current systems.

Neverfail Protects VMware Infrastructure

Monitor & Clone Your VMware VirtualCenter Server



Neverfail for VMware VirtualCenter duplicates your VMware VirtualCenter server and proactively monitors server health.

TO HELP ENSURE IT STAFF won't lose key VMware VirtualCenter services, Neverfail for VMware VirtualCenter clones and continuously replicates the VMware VirtualCenter server's configuration settings, data, and SQL Server databases onto a secondary server.

If any major issues arise with either the VMware VirtualCenter server or connected hardware, the Neverfail software automatically fails over VMware VirtualCenter to the secondary server with the cloned VMware VirtualCenter data. Neverfail also maintains connectivity to the primary server until the outage can be resolved, so IT admins can continue to use the VirtualCenter management features with up-to-date data.

Neverfail for VMware VirtualCenter checks the health of the management server software, the hardware for the VirtualCenter server and associated components (such as License Server), the network infrastructure, and the OS. In some cases, the software may simply alert IT staff to a problem, while more serious issues cause automatic failover. If Neverfail switches to the secondary server, IT staff can continue to use the features of the VMware VirtualCenter without problems, so end users won't lose access to apps and IT staff won't lose VirtualCenter's management or control operations.

Neverfail For VMware VirtualCenter

Starts at \$10,000 per pair of servers

Software that monitors and clones the VMware VirtualCenter server to ensure IT staff can use the management and control tools of the VMware VirtualCenter

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www.neverfailgroup.com



KVM Shopping? Consider Price, Quality

New ATEN Consoles Bring High Quality, Affordability To Smaller Businesses



ATEN TECHNOLOGY'S NEWEST KVM switches, available in both 8- and 16-port models, combine high-quality features and a price that's affordable for the small to midsized business.

Both the KH1508i and KH1516i support up to 64 user accounts and allow up to 32 concurrent logins. Users can communicate with each other using the built-in message board feature, or a single user can take control of the KVM functions. Multisession functionality means you can easily view all server activity and switch among servers connected to the device, and a Panel Array Mode lets you view

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KVM consoles featuring built-in remote management and multisession capabilities

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all ports at the same time. Password protection and advanced encryption technologies mean access to your servers is secure.

The new ATEN KVM over the NET switches feature:

- Built-in TCP/IP and remote management functionality, so it's simple for you to manage and control the devices from virtually anywhere you can access the Internet
- CAT 5 (or higher) cabling for less cable bulk; RJ-45 connectors allow implementation of all ports
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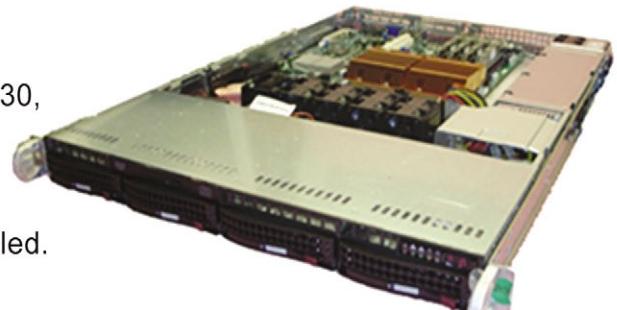
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3U Server - ASA3161

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Finding The “Off” Switch

How Can SMEs Begin Reducing Power Consumption?

by Elizabeth Millard

IT SEEMS THAT NEW HARDWARE for the data center is churned out every week, with better functionality, security, and cooling features. But as IT managers know, so much equipment requires enough uninterrupted power to keep operations running smoothly, and that can be a challenge at small to midsized enterprises that are trying to stay efficient. Here are some top tips for reducing consumption and boosting overall power.

Upgrade To Best-In-Class Server Power Supplies

There are many times that data centers can cut corners and try out unproven hardware and software, but this isn't one of them. Go for the gold standard as much as possible, and if that requires some initial cash outlay, then make room in the budget. Part of reducing consumption means increasing efficiency, and best-in-class products can help attain that.

The best power supply systems deliver 90% efficiency, although there are many systems that are only in the 75% range, says Jack Pouchet, director of energy initiatives at Emerson Network Power (www.emerson.com). Spend a bit more for the highest level of efficiency now, and chances are that the data center will be reducing its overall consumption, constituting a long-term savings.

Maximize Power Management Software

Along with the power supply upgrade, invest in effective power management



software, Pouchet advises. "Data centers are sized for peak conditions that rarely exist, which means server power consumption remains relatively high even when server load isn't," he says.

Server processors have built-in power management features that can reduce power when the processor is idle, Pouchet adds, but often these features are disabled because

IT managers feel they affect response time. He notes, "That decision is worth reconsidering in light of the potential savings."

Check The Load Balancing

Some SMEs use traditional single-phase power distribution to do load balancing, but that's often poorly managed, says Brad Wilson, chief technical director at Geist Manufacturing (800/432-3219; www.geistmfg.com). Instead of thinking of a data center as a space that needs as much power as it can get at every hour of the day, Wilson recommends thinking about how much power is necessary at different levels, such as at the cabinet level and for the larger room. In many cases, he notes, distribution can be balanced within each cabinet.

As part of balancing the load, some power can simply be switched off depending on time of day, if the equipment within the cabinet is not mission-critical, or the system is auxiliary. Internet power switches can control a rackmount environment remotely, so power can be managed, rebooted, or changed to different user-defined defaults. This is helpful at different times of the year, such as around the holidays when there are few employees in the building or during a heat surge when cooling must be intensified and power has to be increased.

Focus On Cooling Best Practices

Many SMEs have hot-aisle and cold-aisle rack arrangements, but Pouchet notes that data center managers shouldn't stop there. Managers can find potential efficiency gains in sealing gaps in the floors, using blanking panels in open spaces in racks, and even organizing cables within a rack to maximize airflow. Also handy are strategies such as using computational fluid dynamics—which some power and cooling vendors offer—to identify inefficiencies and optimize airflow.

Other technologies are also available to prevent cooling problems. Digital scroll compressors and variable frequency drives in CRACs (computer room air conditioners) allow high efficiency to be maintained at partial loads, according to Pouchet. These work by matching the capacity of the air conditioners to the room conditioners without turning compressors on and off, an action that can increase power consumption.

"In addition, higher-density data centers require shifting some of the cooling load

Top Tip: Think About Consolidation

The simplest way to reduce energy consumption in a data center is basically the same as cutting down energy use in a home: Do more with less. Rather than having every light on, have more efficient lights in strategic locations, for example. In a data center, increasing server utilization with virtualization and other consolidation tactics means less equipment is needed, and less power is used. One of the largest aspects of this is around storage [See page 11, "Smarter Storage, Lower Electricity Bills" for tips on reducing power consumption related to storage devices], but also important are other types of servers and network appliances.

In consolidating, a data center may find that there are some servers or other equipment running that are unnecessary or don't even perform any specific function. This is the case in numerous data centers, notes Ken Brill, executive director at the Uptime Institute. "Up to 30% of corporate servers are basically comatose," he says. "They've been replaced by something but haven't been shut off." This is most prevalent in companies without procedures in place for disposal of outdated equipment.

from CRACs to supplemental cooling units mounted above or alongside the rack," Pouchet says. "Supplemental cooling units can reduce cooling costs by 30% compared to traditional cooling strategies."

Tap Into Monitoring Technologies

Products are available that can monitor power usage, so a data center manager can see spikes and adjust accordingly. Also handy are monitoring tools for cooling because rack densities are rarely uniform in a data center and can create inefficiencies if there isn't enough optimization.

"Room-cooling units on one side of a facility may be humidifying the environment based on local conditions, while units on the opposite side are dehumidifying," Pouchet notes. "Cooling control systems can monitor conditions across the data center and coordinate the activities of multiple units to prevent conflicts and increase teamwork."

Get Expert Help

Many firms specialize in power and cooling audits and assessments and have ample expertise on staff related to data center construction, renovations, and operations. Trying to juggle all the needs of an SME and become an expert in power consumption is a daunting task, so don't be afraid to bring in professionals who can provide a bevy of services.

Often, product vendors can bundle in services along with their power management tools. Field technicians can start up and commission equipment, perform planned maintenance, and diagnose problems remotely.

Most Helpful Tip: Avoid Power Stepdown Losses

In most data centers, the UPS provides power at 480V, which is then stepped down through a transformer, with accompanying losses, to 208V in the power distribution system, says Jack Pouchet, director of energy initiatives at Emerson Network Power (www.emerson.com). These stepdown losses can be eliminated by converting UPS output power to 415V, he notes.

"The 415V three-phase input provides 240V single-phase, line-to-neutral input directly to the server," Pouchet says. "The higher voltage

not only eliminates stepdown losses but also enables an increase in server power supply efficiency."

Servers and other IT equipment can handle the 240V AC input without any issues, Pouchet points out. SMEs can also gain efficiency by forgoing double-conversion UPS systems, but those gains do come with the risk of reduced equipment availability, so look closely at whether availability is more crucial than the efficiency you could obtain.

making the program easier to install, configure, and manage.

Enhanced virtual tape library. It now offers the highest level of granularity on how files, directories, and tapes are managed. Version 7.0 has also included integrated VTL for better disk-based backup structure and quicker backups and recovery. 1TB of disk capacity is included.

Extended platform. Version 7.0 has been expanded to support Novell OES 2, Mandriva 2008, Windows Server 2008, and Mac OS X Leopard on Intel.

Arkeia Network Backup version 7.0 includes other innovative data protection features, such as triple backup verification, automatic SCSI detection, and client-side encryption. Additionally, Version 7.0 is suited for enhancing SAN environments, and it offers just one solution for all platforms.

STORAGE

FEBRUARY 1, 2008

Powerful Network Backup

Arkeia Adds Features For SMEs With Distributed Data & Remote Offices

YOU DON'T NEED TO spend a lot of time and money dealing with a complicated data manager. Arkeia Network Backup version 7.0 is a simplified, powerful enterprise-ready network backup and data protection solution for intricate and dispersed enterprises, such as those with remote branches.

With business packs available for small, medium-sized, and large networks, version 7.0 is designed to save time and money while enhancing backup performance and flexibility for distributed infrastructures.

Version 7.0 adds several new features:

Federated data protection architecture. Centralized management of various



ances from the data center to the remote branch.

New GUI. This Web 2.0-based user interface now includes online help and wizards,

Arkeia Network Backup version 7.0 supports open-source systems such as Linux, MySQL, PostgreSQL, Open-Xchange (including SLOX), and LDAP.

Arkeia Network Backup version 7.0

Starts at \$800

Network backup solution that includes central management to enhance management and customizability, along with features to boost data protection for intricate and dispersed enterprises

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Power Consumption: The Main Culprits

Continued from Page 1

data center is still relying on a mainframe, it is likely that it is consuming more energy by far than any other hardware device, including heating and cooling units. A mainframe was not built to be energy-efficient; instead, it was built to address the changing computing requirements of companies with an increasing reliance on data that feeds every aspect of business: marketing, sales, operations, finance, etc. One of the most dramatic changes you can make in power consumption and environmental change is to replace a mainframe with more energy-efficient blade servers and consolidate data center operations.

Staying Cool Has A Price

One leading culprit in energy consumption in a data center actually has nothing to do with computer technology. Air-conditioning units consume vast amounts of power, as admins attempt to keep data center temperatures between 65 and 68 degrees Fahrenheit (about 18 to 20 degrees Celsius). This expense is what accounts for the majority of the cost on a utility bill.

According to Laura DiDio, a senior researcher with Yankee Group, air-conditioning units are the primary reason why data center admins have started to investigate power consumption and do not want to be surprised by energy costs. She says power usage has risen from a third- or fourth-tier concern to a much higher concern for companies, often a close second behind actually providing reliable and scalable storage and services.

"The largest problem is inefficient cooling deployment," says Brad Wilson, the chief technical director at Geist Manufacturing (800/432-3219; www.geistmfg.com). "This often leads to overprovisioning of cooling to keep the servers cool. This is compounded by the inherent efficiency factors in the total cooling system."

Power-Hungry Hard Disks

Another culprit in power consumption is storage arrays and specifically the hard disks in storage devices. According to Greenest Host (www.greenesthost.com), which specializes in environmentally engineered data centers, the magnetic disks used in a data

center do not hibernate like they do in a laptop or desktop. They also run at much higher speeds (about two or three times as fast as a consumer drive) and are accessed almost continuously in some firms, such as data service providers or financial institutions.

DiDio says the best course of action for admins is to aggressively root out any older hardware, such as inefficient hard disks, and replace them with more efficient systems.

Demanding CPUs

Yet another power-hungry consumer is the CPU in servers. At even a smaller company with just a few servers, the CPU is often running at full power, providing the core computing capability for all applications. Wally Phelps, a product manager at DegreeC (www.degrec.com), a cooling electronics company, says CPUs are increasing, not decreasing, as a main culprit in power consumption as they are stressed even more inside a physical server and host more operating systems for virtualization.

"Consider the migration from single-core, dual-core, and now quad-core processors all on a single chip," says Phelps. "There have

Other Power-Hungry Products

- **Power distribution units.** These are intended to provide power for devices in the data center but run continuously and are sometimes not properly configured for power management.
- **Servers.** In addition to the CPU in a server, the server itself is a top energy consumer, due to the components inside the servers, such as the motherboard and hard disk.
- **Networking equipment.** This includes routers and switches, which are generally designed for low power consumption but—in total—can lead to a high consumption.

recently been great advances by the chipmakers to help reduce this power when idle, but consider that when the CPUs are requested to do the function they were designed for, which is computing, they must be switched immediately to full power mode. The move to virtualization, which makes better use of the CPU's capacity, means there is less idle, aka low power, time for the CPUs." P

Tracking Your SME's Assets

Continued from Page 1

inventory in the first place," he continues. In a more practical vein, he suggests using an auto-discovery tool to get an idea of what is on the network. (See the "Auto Discovery 'Fingerprints' Network Tools" sidebar for more information.)

Once policies are in place, new technologies can help both to prevent laptop theft (as a deterrent) and to mitigate damages should a laptop go missing. For home office situations, products can provide a strong deterrent and help police both recover stolen computers and prosecute thieves.

"With the advent of so many mobile devices, the issue and concern expands to

other devices containing corporate data like BlackBerrys," Nelson notes.

Protect Your Information

"Full-disk encryption is a great first start," says Natalie Lambert, senior analyst for security technology with Forrester. She advises protecting the machine against loss and theft and then using encryption as a primary measure to put in place much tighter data protection technologies. "Full-disk encryption will protect the organization against a data breach in the case of a stolen or lost laptop," she explains. "This is not a full data-protection strategy, but it is an easy and cost-effective thing to do to get a checkbox next

to laptop loss." Data leak prevention, DRM (data rights management), and file encryption will start to actually protect the data.

Nelson advises locks for laptops, laptop cases, security cables, etc. "If you are really paranoid, you can purchase motion-sensing alarms that will alert you when the item is being moved," he says. "For laptops, get PC Radar. It is a device that attaches to the laptop and another mobile device that you put in your pocket. If they get too far away from each other, the alarm activates."

Nelson also is high on tracking and recovery tools such as LoJack for Laptops, which "phones home" whenever it is on a network; The CyberAngel from CyberAngel Security Solutions (www.thecyberangel.com), which also encrypts the data on the hard drive; and zTrace Technologies' zControl (www.ztrace.com), which can be used to delete data after a laptop has been stolen, lock the keyboard and mouse, and flash a message letting the bad guys know they have been discovered.

According to LoJack (www.lojack.com) more than 2 million laptops are stolen every year. That means the average user has a one-in-10 chance of having his laptop taken. The logical next step is finding the lost machine.

New technology allows SMEs to track laptops regardless of location, recover those that go missing, and remotely delete sensitive information. This technology is readily available and very cost-effective when measured against the cost of a data breach.

Keep Tabs On Your Inventory

From common-sense strategies to high-tech tools, the ability to deter notebook

theft is well within the grasp of even the smallest business. Use cable locks while laptops are in offices or at home, take care to store laptops in car trunks when transporting them, and use nondescript cases rather than telltale laptop bags. If you have a large laptop population, take advantage of Internet-based tracking software to monitor their movements when outside company facilities.

The first step is to determine the organization's ability to audit where computers are and who is using them, Livingston says. Traditional IT asset management solutions can help keep track of computers that are in the office and connected to a corporate LAN. For mobile computers that go outside the office, security experts advise using tracking software that leverages the Internet to follow computers as they go out in the field with salespeople or traveling executives.

"Such software can also help you determine whether the antivirus products installed on mobile computers are up-to-date," Livingston says. "If you don't know where your computers are, detecting when they are missing or stolen will be very difficult."

Once you are able to accurately track computers regardless of location, employees should be educated on the importance of immediately informing IT should they find that their computer is missing, security experts agree. With tracking and recovery software installed, IT can then take the necessary action—whether it is remotely deleting information or working with police to physically recover the computer. P

Auto Discovery "Fingerprints" Network Tools

Just as parents are urged to fingerprint children, Eric Nelson, director of business development at Alteritech (www.alteritech.com), suggests using Nmap (Network Mapper; nmap.org) or another open-source tool to "fingerprint" or identify what's on an SME's network.

"For larger, multisite companies, the more robust open-source IT tools, like Zenoss Enterprise, have very nice CMDB capabilities," he says. Be warned that auto-discovery tools only see what is on the network at any given time or over a period of time. "This doesn't address the 'backup' and unused inventory

lying around that still may have important corporate data on them," Nelson says.

Don't stop with laptops. The concern expands to other devices containing corporate data such as BlackBerrys (www.rim.com), smartphones, and iPhones (www.apple.com). "With BlackBerrys, you have much more control over locking down the handset and controlling it remotely," Nelson says. Other devices relying on ActiveSync and other methods of syncing with corporate assets are much more problematic, with the iPhone being the most problematic of all," he says.

readable option. Numerous hard drive options are available and up to 16GB of Compact Flash memory can be added.

This tablet runs on WinXP Pro or Embedded and can run any application. It uses a VIA Eden 1GHz processor and can be configured with up to 1.25GB of DRAM.

For extra efficiency and functionality while on the go, Glacier includes Bluetooth 2.0 and 802.11a/b/g connectivity. Should your needs require GPS, there is an optional built-in GPS with integrated antenna.

On the front of the device you'll find various application buttons, including 12 numeric keys, one software keyboard button, four programmable function buttons, and a four-way navigation button with integrated Enter button.

Rugged & Mobile

Glacier's Ridgeline Tablet PC Brings Computing Power To Harsh Environments

ALL OF US KNOW that harsh environments and electronics do not mix. However, many industries are unable to avoid harsh conditions. That's why Glacier Computer developed the Ridgeline Tablet PC. With this rugged tablet computer, construction, utility, and delivery workers can easily retrieve, send, and manage information.

This rugged tablet computer can withstand repeated 3-foot drops to concrete, and



water and humidity extremes at virtually any temperature. The Ridgeline Tablet PC can operate in temperatures ranging from -20 to 60 degrees Celsius. This tablet withstands even greater storage temperatures, ranging from -40 to 70 C.

For workers on the move, the Ridgeline is portable and comes with a choice of a 10.4-inch SVGA or XGA transmissive TFT touchscreen display with a sunlight-

Many connectivity ports are available, including two USB 2.0 ports, a VGA output, RJ45 and RJ11 jacks, headphone jack, microphone jack, and a docking connector. This tablet also comes with an internal microphone and stereo speaker.

Glacier Computer Ridgeline Tablet PC

Starts at \$3,000

Rugged tablet computer that gives your mobile workforce the flexibility and durability they need

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Smarter Storage, Lower Electricity Bills

Better Planning For Data Backups Can Reduce Power Costs

by Bruce Gain

THE ELECTRICITY BILLS of IT infrastructures can often be staggering, and they should only continue to swell as energy costs climb. Admins are hit doubly hard as they face the increasingly expensive struggle of how to back up and archive surging bits of data.

According to Liebert (www.liebert.com), the annual power cost of data centers in the United States can be as high as \$3.3 billion. Liebert also cites a 2007 survey by Data Center Users Group, which said 46% of data center managers in a survey said power limitations represented the main impediment to growth.

More intelligent storage management is one way to take a chunk out of how much electricity your data center and network infrastructure are consuming. Doing that involves finding better ways to manage existing storage while reducing excess capacity.

"With storage holding the third most power-consuming technology in most data centers (after cooling and servers), small to medium-sized businesses have a lot to gain from improving their storage power usage," says Dave Garrels, marketing programs

Best Tip: ILM Offers More Than Just Power Savings

ILM (information lifecycle management) can offer a comprehensive approach for data management while reducing power consumption. A major component of ILM involves distinguishing between data that must be readily accessible and data that just needs to be archived.

"[Using ILM] to develop procedures to move data to the most appropriate storage tier is relatively easy and yields quick returns," says Ron Lloyd, manager of storage product marketing at EMC (www.emc.com). "Other techniques like thin provisioning can drive up storage utilization and save energy, as well. Deduplication of backup data can reduce backup requirements and costs by a considerable margin."

manager in the StorageWorks Division at HP (www.hp.com).

Take Stock

Admins today are required to have some kind of storage plan, but most do not have the perfect system in place without room for improvement. For those without a sound plan, power consumption and other constraints mean it is no longer viable to just ensure that data worth being archived is merely secure and retrievable. Coming up with a more power-efficient plan involves creating a long-term storage plan and strategy.

"With growth in the amount of data to be stored increasing at an average of 60% per year, it's no longer possible to simply keep doing the same old thing: buying more of the same storage, deploying it, managing it, and backing it up," says Ron Lloyd, manager of storage product marketing at EMC (www.emc.com). "Finding ways to effectively use a variety of storage media and matching the right storage to the application requirements can yield greater resource utilization while reducing operational costs."

Coming up with a plan involves taking a big-picture look at your SME's storage infrastructure and what your data center's needs are now and will be in the future.

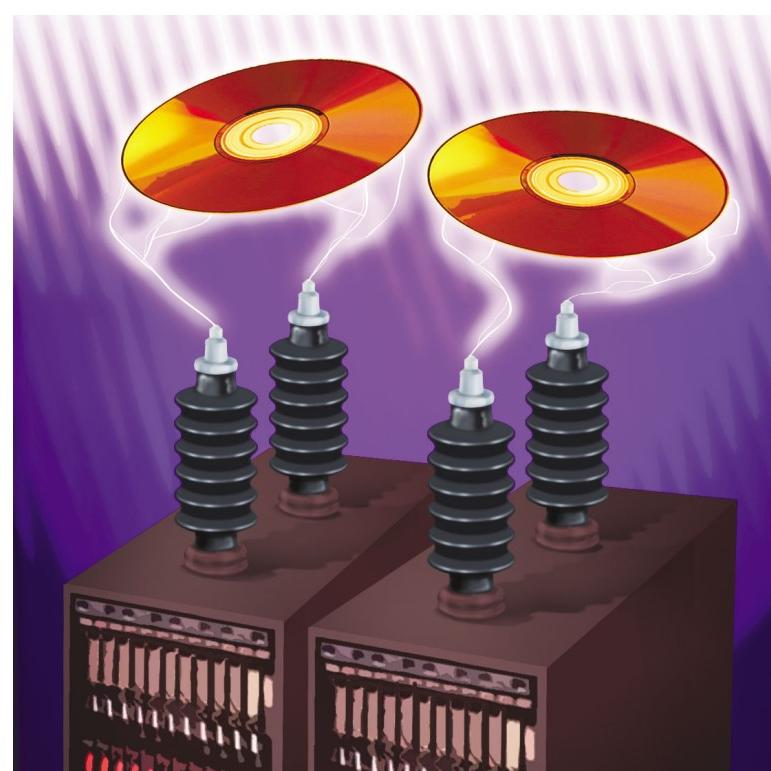
"Perhaps the most important action is to make a careful assessment of exactly what's in place today, evaluate future requirements, and develop a long-term strategy for managing storage growth," Lloyd says. "This proactive approach can help preclude short-term emergencies and fixes."

Solutions exist that help to determine where and how storage capacity is best used. Software, for example, can help to eliminate redundant capacity by automatically gauging storage needs to improve capacity utilization, Garrels says. "[With capacity management software], businesses have seen doubled capacity utilization efficiency and savings of up to 45% on power," he notes.

Get Rid Of Dead Capacity

Reducing power consumption can involve something as basic as storing more data on high-capacity disks. Given that the amount of power required to spin the mechanical heads on disks does not vary much from one disk to another, power consumption is similar regardless of whether a disk has terabytes or megabytes of capacity.

"The power consumption of a single 160GB hard disk drive is about the same as a single 1TB drive. In this case, powering one large device will save considerable



power over powering six smaller devices simultaneously," says Michael Howe, CTO and co-founder of IT in Canada (www.itin.ca). "Much less heat would be generated, which means less cooling cost, so there is greater energy savings here, too."

Consolidating storage onto higher-capacity disks can offer power savings by eliminating excess data capacity. This is where the argument to opt for centralized storage to replace direct-area storage comes into play.

"Many small and midsized companies are still primarily using direct-attached storage in individual servers; this spreads data across isolated servers and results in an inefficient use of capacity and ultimately higher costs to run and manage," Garrels says. "Consolidating data into network storage improves efficiency because disk spindles become shared resources for multiple servers."

Indeed, isolated storage is often cited as a principle energy problem in the SME space, EMC's Lloyd says. "Unlike large data centers, the small data center is far more likely to utilize storage that is dedicated to individual servers, which makes it very difficult to use storage efficiently," he notes. "Studies show that direct-attached storage typically yields between 25 to 30% capacity utilization, with most of the energy used to spin empty disks. Consolidating this storage via shared network infrastructure can yield overall capacity utilization of 70 to 80%, ensuring considerable savings on energy costs."

Make Existing Technology Work

Squeezing power savings out of your data center and network does not require making hefty investments. Doing more with existing technology is a good start, Howe says. "We might try utilizing compression software to pack more onto the same amount of disk space. This may increase data-access time due to the extra processing required to uncompress," he says. "Another option might be to move infrequently accessed data to another storage medium, such as tape, which uses very little power (depending on how implemented) when it's not in use."

Make It Virtual

Using storage virtualization represents another way to save power, and the technology can also improve the overall efficiency of your data center's operations.

"Storage virtualization software . . . can help increase the utilization of storage and reduce requirements for additional storage in the future, which can help reduce the total amount of storage required and so helps reduce energy use," says Ron Riffe, storage software product manager at IBM Tivoli (www.ibm.com).

Storage virtualization software can help improve the overall flexibility and responsiveness of an entire IT infrastructure by helping to more quickly meet the constraints of new business requirements, Riffe notes.

"Using [storage virtualization software] . . . to virtualize storage can help improve storage utilization, can help control storage growth, and can help improve application availability by enabling configuration changes such as data movement without disruption to servers," Riffe says. "Because [storage virtualization software] . . . centralizes management of storage and manages supported storage in a common manner, it can help improve the productivity of storage administrators. Finally, [storage virtualization software] . . . implements common replication functions that operate in the same way for all supported storage systems." □

NETWORKING & VPN

MARCH 14, 2008

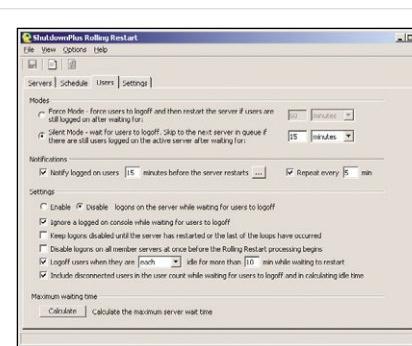
Save Your Servers

Automatically Restart With WM Software's ShutdownPlus Rolling Restart 7.0

A RESTART SCHEDULE is important with servers that run 24/7. Servers can become slower over time due to improper cleaning of registries and closing of user sessions. With users who stay logged on, you'll want to make sure they don't get locked out when the server reboots. ShutdownPlus Rolling Restart 7.0 from WM Software runs on all versions of Windows Server OSes and helps automatically log off users, close registries,

and shut down/restart servers without requiring IT staff to schedule server restarts around users' time commitments.

ShutdownPlus Rolling Restart is designed to shut down terminal servers on a round-robin schedule through a hub-and-spoke model, so one server is the master and the others are member servers. The



ShutdownPlus Rolling Restart 7.0 can automatically reboot servers without affecting users.

master server selects a member server to restart, disables that server's logons, and then restarts the server. Once the member server has been restarted, logons are re-enabled, and the master server moves on to the next server. Users will receive a notification that their server will be restarted, and the master server can force log-offs immediately or after a defined time.

The member server must wait until all users are logged off before restarting, and ShutdownPlus 7.0 features a Silent Mode to

skip servers and retry later if users are still logged on. When logons are forced on a server set to restart, the software's load balancing can automatically place the user on another server. It's compatible with Citrix.

WM Software ShutdownPlus Rolling Restart 7.0

Starts at \$245 per server license

Allows IT managers to control and automate standard terminal server restarts

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Power-Conscious Products

Manufacturers Are Producing More Eco-Friendly Data Center Equipment

by Brian Koerner

• • •

GOING GREEN ISN'T JUST A BUZZWORD spoken by those concerned about environmental issues anymore. While reducing energy has a positive effect on the planet, corporations big and small are feeling the effect that high energy costs have on their bottom line—and data centers are no different.

By design, data centers have been a cluster of power-rich, energy-guzzling, IT-related infrastructure that organizations have grown to depend on. Arguably, the cost of running a data center has more to do with energy consumption than the cost of the hardware itself. In fact, worldwide, the cost of data center power consumption is expected to exceed \$7 billion annually.

As data centers continue to have increasing power-related demands placed on them, managers are finding themselves in an interesting dilemma: They need to provide increasingly more power and services but must improve operating expenses, reduce energy costs, and improve the bottom line. Data centers are therefore moving toward using power-conscious and energy-efficient products to meet these goals.

Power-conscious products consist of those products that are aware of the power needs in the data center and react accordingly. Power-conscious products can be hardware or software that a data center uses to help manage power distribution levels in the data center. Energy-efficient products are typically hardware products that by

design are efficient in their use of energy, contributing to the overall need of the data center to consume less power. Manufacturers of data center-related products are rising to the challenge and developing power-conscious or energy-efficient products that can help. Here are a few of those products that data centers are using to reduce their energy costs and improve their bottom line.

Cyber Switching PDUs

Data center managers rely on PDUs (power distribution units) to ensure the uptime of server, storage, network, and other devices in the data center. Cyber Switching (408/436-9830; www.cyberswitching.com), in San Jose, Calif., offers energy-efficient intelligent PDUs, such as the DUALCOM 820, with load-shedding capabilities that allow granular control during defined demand/response periods. Managers can define specific outlets as noncritical and configure them to be turned off during specific time periods or events.

The Cyber Switching devices are power-conscious and allow a data center manager to further control the way in which power is used in the facility, ultimately improving the data center's operational expenses.

ColdWatt Power Supplies

Based out of Austin, Texas, ColdWatt (www.coldwatt.com) provides data center managers the ability to cut their energy costs by replacing existing power supplies with ColdWatt's more energy-efficient alternative power supplies. According to ColdWatt, a server that requires 200 watts of electricity will actually use more if it is outfitted with a traditional power supply. For example, it will burn up 96 watts through power conversion alone, and 193 watts will go toward cooling the machine and in reality use more than 500 watts of energy.

However, with a high-efficient ColdWatt alternative power supply, only 24 watts of electricity are needed for power conversion and 106 watts for cooling. According to ColdWatt, a data center with 400 servers could realize a savings of \$50,000 by replacing

existing power supplies with its more energy-efficient alternatives.

Cassatt Power Management

According to San Jose, Calif.-based Cassatt (www.cassatt.com), its Active Response software product line uses a patent-pending technology called Active Power Management that monitors server resources, whether they are physical or



DUALCOM s820 is an intelligent, power-conscious PDU from Cyber Switching (408/436-9830; www.cyberswitching.com) that offers data centers the ability to shed loads during specified time periods to reduce energy consumption and operational costs.



Replacing existing power supplies with the energy-efficient alternatives ColdWatt (www.coldwatt.com) offers can help data centers save thousands of dollars in energy costs.

virtual, and determines how they can be used most efficiently. By using configurable policies, the resources can be powered up and down as needed, while taking into account such considerations as time of day, resource demand, and power-use patterns. Cassatt says its software can assist a data center at significantly lowering its energy costs by as much as 50% at times.

Dell Servers

Every data center has a plethora of servers providing computing power to its users. Historically, servers have been one of the larger consumers of power in a data center, but that's now starting to change. Dell (www.dell.com) has improved its PowerEdge models to be more efficient by using energy-efficient multicore processors, fans, and power supplies. Though

the servers cost more than regular models, the savings can be significant, and a data center can potentially save hundreds of dollars per server in reduced annual energy costs. Dell isn't the only server manufacturer rising to this challenge; Sun Microsystems (www.sun.com), IBM (www.ibm.com), and HP (www.hp.com) are also making their server platforms more energy-efficient.

Data Aire Cooling Systems

You couldn't properly discuss efforts to reduce the energy costs in a data center without talking about cooling systems.

Data center cooling systems themselves consume a good deal of energy in their effort to keep data center equipment at just the right temperature so that it functions optimally. Data Aire (www.dataaire.com), based out of Orange, Calif., specializes in energy-efficient products for data centers, including floor-mounted units, heat exchangers, ceiling-mounted units, and system controls. It also offers several monitoring options that can help data center managers monitor the efficiency of the data center's cooling systems, helping reduce unnecessary energy consumption.

Data Aire's DX Series comes equipped with features such as the Data Alarm Processor-II microprocessor control, dual-scroll compressor, and steam generator humidifiers. The series offers state-of-the-art environmental control and is designed for either upflow or downflow air discharge in air-cooled or water/glycol-cooled DX systems from 6 to 30 nominal tons.

Nexsan Storage

Data centers have a plethora of storage needs that, very often, add significantly to the increasing and overwhelming demand for power. Nexsan (www.nexsan.com), headquartered in Thousand Oaks, Calif., embraces energy efficiency as a competitive advantage and offers a broad range of technologically advanced, secure storage solutions that are energy-efficient.

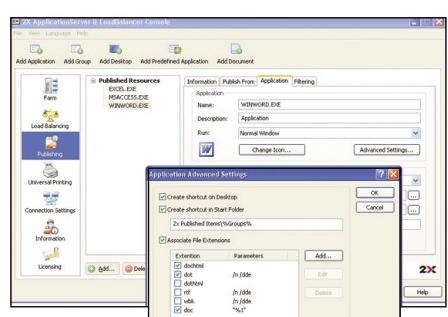
AutoMaid, a Nexsan energy-saving technology, reduces power consumption by placing the storage drives into an idle state when they are not being used. AutoMaid offers the benefits of MAID (massive array of idle disks) without the limitations of slow access times. AutoMaid can be configured for a specific drive or for a complete RAID drive set. It also has multiple configurations so an organization can balance access speed and energy savings to implement a configuration that is ideal for its environment. □

NETWORKING & VPN

MARCH 7, 2008

Affordable Thin Client Computing

X2's New ApplicationServer v.6 Offers Secure, Flexible App Access



With an easy-to-understand interface that significantly reduces the initial learning curve, 2X's ApplicationServer v.6 offers remote users secure access to centrally managed applications and data.

X2's ApplicationServer v.6 makes it easy to offer secure remote access to central applications and data.

By installing ApplicationServer on a Windows Terminal Server system, admins can deliver and manage applications in a Citrix-like fashion without Citrix's high maintenance and upgrade costs.

With ApplicationServer v.6, the user's login credentials determine the applications available to him. It also allows access to multiple terminal server farms from a

single client with SSL security. Even when accessing more than one server farm, only a single login is necessary.

A few features conserve bandwidth for maximum performance. ApplicationServer v.6 sends only screen updates to the client, not client-server data. The client can redirect email and Internet traffic through local apps, reducing traffic to the host server. Further mitigating unnecessary resource consumption, the server will keep apps from claiming large amounts of processing time and memory. The program limits clients to single instances of each application.

2X Software ApplicationServer v.6

Starts at \$695; a free version with support for up to five client connections is available.

Easy-to-use application publishing provides flexible, secure access to applications.

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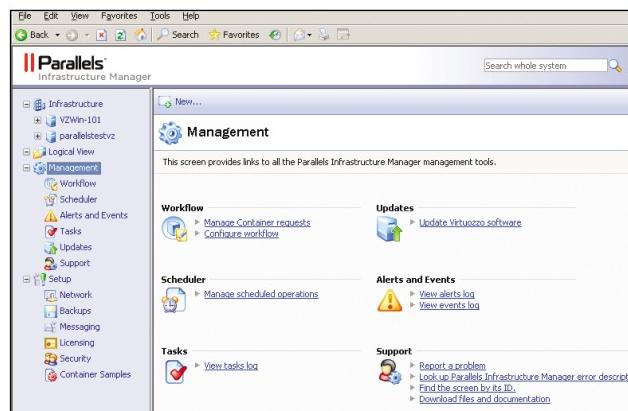


NETWORKING & VPN

FEBRUARY 22, 2008

Virtualize Your OS

Parallels Virtuozzo Containers 4.0 Partitions Server OSes



VIRTUALIZED SERVERS allow SMEs to centralize desktop applications and OSes to create a secure, controlled, and managed environment. Parallels Virtuozzo Containers creates isolated containers of a single physical server and OS instance, which allows IT managers to consolidate performance-sensitive workloads and increase the virtual servers on each

Parallels Virtuozzo Containers 4.0

\$3,000 per dual CPU

Separates a server OS into independent virtual partitions, which helps increase memory efficiency and avoid virtualization performance bottlenecks

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You can create dozens to hundreds of containers on each standard physical server.

physical hardware node without reducing performance. With Parallels Virtuozzo Containers 4.0's granular resource controls, you can make real-time adjustments to hardware resources. Version 4.0 improves the

Virtuozzo file system to more effectively use hard drive resources.

Another advantage is the ability to deploy patches and upgrades to all containers and across servers and reduce management time with OS sprawl. To drive uptime, it includes support for high-availability configurations, including clustering in Windows Server 2003 and Red Hat Enterprise Linux, as well as Microsoft Network Load Balancing. The software supports real-time backup from Linux and Windows and features a complete and automated backup scheduler.

Parallels Virtuozzo features a Transporter tool to let you select and migrate resources from a physical or Virtual Machine Monitor server to a container. 4.0 introduces the Parallels Infrastructure Manager, which lets IT admins manage the infrastructure via dashboards.

NETWORKING & VPN

FEBRUARY 22, 2008

Advanced Auditing Tools

Ecora Auditor Professional 4.5 Offers Improved Performance



Ecora's Auditor Professional 4.5 includes a dashboard that clearly displays systems' level of compliance.

TODAY'S SECURITY demands and compliance requirements make it more important than ever for a company to have a system in place to monitor data center activity and configurations. Ecora Software's Auditor Professional 4.5 can help companies ensure that their data centers meet both.

Version 4.5 provides auditing and analytics tools to help IT managers adapt data centers and achieve the best configurations. Auditor Professional also improves security and performance by implementing closed-loop change validation and

alerting staff when authorized and unauthorized changes occur.

Auditor Professional provides compliance data for security and compliance professionals. Its dashboards can be customized to provide exactly the type of info a user needs. Ecora has also made improvements to the readability, content, and appearance of the software-generated reports. Version 4.5 not only helps companies comply with standards and regulations but helps reduce downtime and improve security.

Users may choose to collect data agentlessly, use agents on select systems, or combine both methods. This lets the software provide audit data, even for systems in a DMZ. Ecora Auditor Professional detects systems using several methods, including IP discovery and Active Directory. It collects not only OS security and configuration data but also that of databases, applications, firewalls, and network devices.

Auditor Professional 4.5 is also compatible with BMC Remedy 6 and HP Service Desk 4.5 and now supports Cisco ASA, Z-Linux, Centos, and Oracle Enterprise Linux, as well as the 18 platforms already supported. Pricing for Auditor Professional varies depending on the unique hardware and configuration of the client environment.

Ecora Auditor Professional 4.5

Software that monitors configuration changes for better security and compliance

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NETWORKING & VPN

FEBRUARY 22, 2008

Consolidate IT Management

LANDesk Management Suite 8.8 Provides Easy Migration, Automation



LANDesk MANAGEMENT SUITE from Avocent puts all IT management tasks into one console. This saves IT a great deal of time when managing security, compliance, and various other system management tasks. The Management Suite also enables automation of certain tasks.

The software can be used to manage multiple locations and is designed for easy migration, simplifying the transfer of users and their profiles to new operating systems. It works across heterogeneous networks and can be used anywhere at any time, enabling users to work with every device in a complex network. In general, the software suite is designed for easy security and management of networks in an enterprise environment.

LANDesk Management Suite v8.8 adds to the foundation already established by earlier versions of the software suite. Setup and some regular tasks are now wizard-based for greater ease of use. With version 8.8, LANDesk users can now remotely manage devices, including Windows Vista machines, from a Mac console.

Software license monitoring and distribution has improved: Managers now have custom access to software packages according to group. Software is automatically installed and removed based on manager-preset access permissions. Extensive platform support lets IT managers keep track of the variety of devices that populate a complex network environment.

Other features of LANDesk Management Suite 8.8 include Intel vPro support, a local scheduler, more than 100 provisioning templates for optimal hardware configurations, and robust alerts.

LANDesk Management Suite 8.8

\$92

IT management software that puts control of a variety of management tasks onto a single console, saving money for the company and time for IT professionals

(800) 982-2130

www.landesk.com



CLIENTS

FEBRUARY 29, 2008

Information On The Go

Webalo Mobile Dashboard Provides Real-Time Intelligence



FOR COMPANIES THAT NEED to provide executives and other mobile decision makers with real-time business intelligence reports but need to host the service internally for compliance or policy reasons, Webalo created the Mobile Dashboard Appliance. This appliance can provide up-to-the-minute information, such as sales forecasts, inventory status, staff utilization, and other key performance data, to handheld devices in virtually any location.

From a Web browser, admins can configure the delivery of pre-existing, internal reports from spreadsheets or other business applications. The Web-based interface uses a simple Q&A setup to walk administrators through the process

Webalo Mobile Dashboard Appliance

\$7,500 for up to 500 users, plus a monthly subscription fee of \$25 per user

Enables administrators to securely deliver real-time business intelligence reports to mobile decision makers

(310) 828-7335

www.webalo.com



of setting up permissions for each individual user and formats the reports automatically. The reports are generated dynamically and can retain the same look and feel of the handheld device by tailoring itself to the device's screen size.

The Mobile Dashboard Appliance is a preconfigured, 2U rackmount server with Gigabit Ethernet. It can deliver service to 500 mobile users with clusters supporting up to 10,000. In-

stallation is simple, with a Web-based interface that helps admins configure and manage the appliance. This interface is relatively easy to use and can be run by employees with basic Web and Microsoft Excel skills. Because the application is hosted internally, companies can maintain their critical information behind a firewall, rather than using an outside service.

To ensure reliability, the appliance supports scheduled backups of encrypted data over SMB (Samba) or NFS. The appliance can also be configured with automatic updates from Webalo.

Webalo Mobile Dashboard Appliance is compatible with most mobile devices, including wirelessly connected BlackBerry, Microsoft Windows Mobile, Palm Treo, and Java-enabled smartphones.

All-In-One Security

Check Point Endpoint Security Covers Firewall, NAC & More



Administrators can monitor multiple security agents with the Check Point Endpoint Security Dashboard.

MANAGING MULTIPLE AGENTS to protect data is time-consuming and expensive. Check Point is working to alleviate those problems with its Endpoint Security, which combines firewall, NAC, program control, antivirus, antispyware, data security, and remote access.

Endpoint Security incorporates many independently recognized technologies, including an industry-leading firewall; anti-malware based on ZoneAlarm; data security based on Pointsec technology; and market-leading remote access VPN.

Check Point provides a single software agent, single-management console, and single installation that can be managed by one administrator. With Endpoint Security's SmartDefense Program Advisor service, administrators can

control which programs can run on PCs. To automate policy decisions and terminate malicious programs, administrators can reference a dynamic database of hundreds of thousands of known good and bad programs.

Check Point's firewall and NAC restrict inbound and outbound traffic to ensure systems are secure before granting access. Antivirus and antispyware components use a combination of signatures, behavior blockers, and

heuristic analysis. To protect data, the program uses full-disk encryption, access control, port management, and removable media encryption.

Check Point Endpoint Security

Check Point Endpoint Security Secure Access Edition costs as low as \$30 per endpoint for 5,000 or more endpoints

Gives administrators a central management console to access many security agents, including a firewall, program control, antivirus, data security, and more

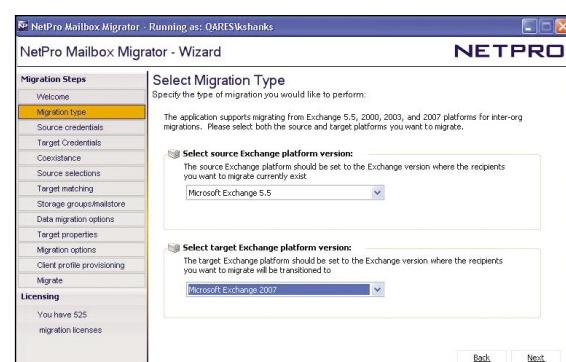
(800) 429-4391

www.checkpoint.com



Exchange Management

NetPro Creates Comprehensive Suite For Exchange



With NetPro's NetMigrate, migration is a transparent, detailed, and streamlined process.

MICROSOFT EXCHANGE SERVER 2007 is a powerful tool for managing servers, offering a wide variety of possibilities within the business-critical Exchange environment. To meet the need for comprehensive software and services to take advantage of all the possibilities, NetPro Computing has a battery of new products. NetPro has released the first two of a suite of products: NetControl for Exchange and NetMigrate for Exchange.

NetControl is designed to simplify the management of email, producing email usage and storage reports so administrators can justify adding personnel and hardware upgrades. The reports also facilitate capacity and migration planning. NetControl helps administrators control data, eliminate duplicate messages, and archive folders and mailboxes

to increase Exchange performance. Restoring email content is also faster with NetControl: The program is designed to eliminate the need to dig through backups for a single email message.

Migration is generally a difficult and sensitive process. NetMigrate for Exchange is designed so that even the smallest email de-

tails, such as calendars and appointments, are accounted for. Migration is transparent, so there is no need for agents, schema extensions, or SQL databases, and production never has to cease. Administrators can also take advantage of NetPro Migration Services for expert assistance in deploying the software.

NetPro NetControl & NetMigrate for Exchange

NetControl: \$6 per seat; NetMigrate: \$18 per seat
Maintenance for each product is an additional 20% of its purchase price

NetControl helps administrators manage email, while NetMigrate makes data migration a detailed yet efficient process

(800) 998-5090

www.netpro.com



Police Your Network

Mimosa Systems' NearPoint Add-on Options For Microsoft Exchange Server

ALTHOUGH E-DISCOVERY products let your SME comply with regulations, not all e-discovery software monitors email in real time or lets you sort through potentially relevant ESI (electronically stored information) data based on file attributes. With Mimosa Systems' NearPoint Custodian Collector Option and Content Monitoring Option, you can add powerful tools to your NearPoint for Microsoft Exchange Server.

The NearPoint Custodian Collector Option lets you search for, preserve, and assess ESI files from file shares, laptops, and desktops. Then the software can place a forensically

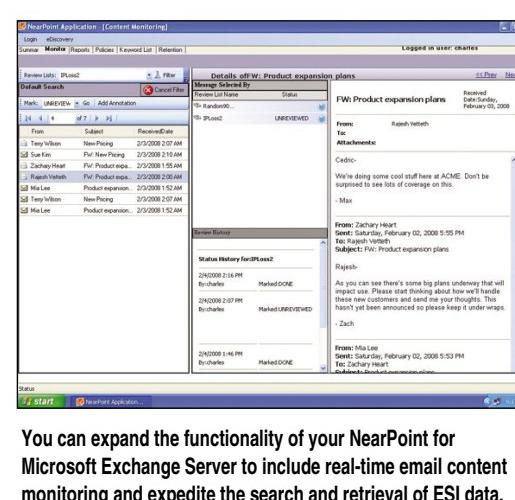
Mimosa Systems NearPoint Custodian Collector Option & Content Monitoring Option

\$6 per mailbox for Custodian Collector Option; \$16 per mailbox for Content Monitoring Option

Powerful add-on options automate file management and alert you to policy violations

(408) 970-9070

www.mimosasystems.com



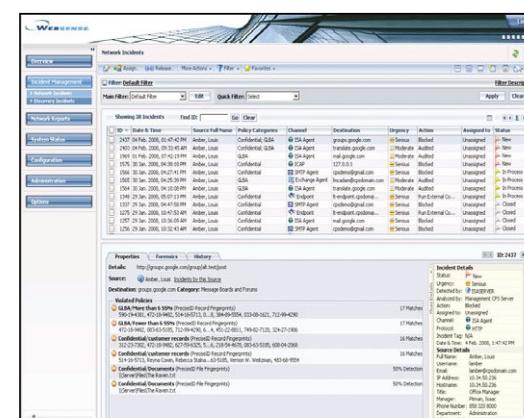
You can expand the functionality of your NearPoint for Microsoft Exchange Server to include real-time email content monitoring and expedite the search and retrieval of ESI data.

defensible copy of the pertinent documents and files into NearPoint's archive. And the software can scan files based on a variety of file attributes, including document owner, modification date, and file type. The Custodian Collector Option can help your SME decrease time needed to identify relevant content for litigation.

The NearPoint Content Monitoring Option lets staff use the NearPoint server to monitor email in real time for policy violations and alert management to risky behavior. The Content Monitoring Option has a policy creation wizard for configuring policies and a customizable keyword list for lexicon creation. It sends email alerts to auditors, so managers don't need to check content logs.

Help Prevent Data Loss

Websense Data Discover Software Manages Information Flow



Websense Data Discover monitors and tracks information movement through network reporting and incident management.

MONITORING THE MOVEMENT of sensitive data is paramount to maintaining confidence in the security of business information. Organizations should take steps toward securing a data loss prevention program. Websense provides such a tool for developing a safeguard system in its Websense Data Discover software.

As a standalone program, Websense Data Discover supports search options for high volumes of confidential information, identifying and classifying corporate files to ensure the protection of data in motion and data at rest. Information stored on file servers, desktops, notebooks, and portable drives requires detailed categorization and location recognition. Data Discover uses language processing and Websense's

advanced fingerprinting technology, PreciseID, to identify these specific forms of data, finding both unstructured and structured data.

With Data Discover, confidential information can be easily found within an organization without sacrificing the capabilities of business processes, letting IT enable safeguard policies and reduce the risk of data loss.

The features found in Data Discover are also in Websense Data Security Suite 6.5 as part of the suite's network awareness procedures. With Data Security Suite, users can configure and map the movement of data with a collection of more than 450 templates. To reinforce data loss prevention, the Data Security package audits the transfer of information to assess workflow risks.

Websense Data Discover

Starts at \$8,750 based on the number of users; one- to three-year subscriptions available

Comprehensive data protection tool suited for managing information in growing organizations

(800) 723-1166

www.websense.com



Virtual Machines Need Real Protection

NetApp's SnapManager For Virtual Infrastructure Gets It Done

THE DATA ON YOUR virtual machines is just as important as the data on your physical servers. But because a virtual infrastructure can change and evolve based on workload balancing or failover requirements, traditional backup and disaster recovery options can be too costly to maintain. These options also often fail to provide adequate safeguards. To address the problem and secure your VMware ESX environment and virtual machines, Network Appliance launched the SnapManager for Virtual Infrastructure.

As the latest addition to the NetApp Manageability Software Family, SnapManager for Virtual Infrastructure incorporates several NetApp technologies into one product that can assist in the creation of automated backups, restoration, replication, and disaster recovery. Components include Snapshot, SnapRestore, and SnapMirror.

Snapshot technology lets users create a point-in-time duplicate of a file system to enable everything from single file recovery to complete disaster recovery. The SnapRestore technology restores files or multiterabyte volumes quickly and efficiently. NetApp's SnapMirror software lets users replicate data across all NetApp storage devices and enable disaster recovery on an efficient and manageable scale.

Storage administrators can virtually eliminate user error by opting to engage SnapManager's automated capabilities. If storage administrators prefer to take matters into their own hands, they can engage tasks manually. For more granular control, users can also incorporate the offering into their existing virtual infrastructure environment policies and create hot backups and rapid restores.

Thanks to the integrated Data ONTAP data protection and the ESX Hot-Backup mode capabilities, users can eliminate time-sensitive backup windows and deliver virtual machine consistent backups. SnapManager saves costs by letting administrators reassign resources once dedicated to and overburdened by virtual machine backups to other applications as they see fit. SnapManager for Virtual Infrastructure also features an intuitive user interface to make configuration and set up easy for users at any skill level.

NetApp SnapManager for Virtual Infrastructure

A backup and disaster recovery platform for virtual machines
(800) 206-5363
www.netapp.com



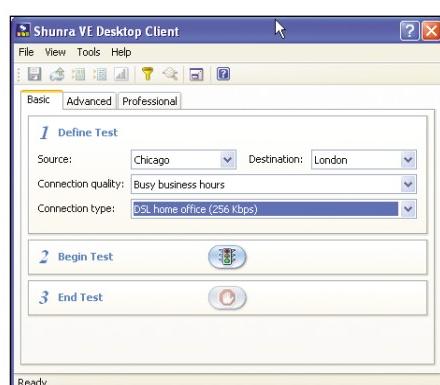
Desktop Network Emulation

Shunra's VE Desktop Standard 4.0 Provides Application Performance Testing

FOR EVERY CODE or app, testing in a lab and testing in a real-world environment are very different processes. The Shunra VE Desktop Standard 4.0 gives users the ability to simulate a variety of scenarios to make their testing more rigorous, saving time and money in the development of applications.

Desktop Standard 4.0 uses a LAN and automatically creates a virtual WAN. When you run tests, this causes apps to act like they're in use by end users on a network. The virtual network possesses prespecified conditions, which you can customize. Network parameters that can be set include packet loss, bandwidth issues, and latency. For convenience and efficiency, you can also predefine test cases before you run them.

Setting real-world-type conditions gives you the ability to see and feel how your applications operate at various



You can use predefined scenarios to test your applications in a virtual network setting with Shunra VE Desktop Standard 4.0.

stages of the developmental process. You can run tests at every phase of an application's development, which allows you to troubleshoot problems early and continuously. All of the feedback is delivered to the user's desktop.

Shunra VE Desktop Standard 4.0

\$499 per client copy (annual license includes tech support)

An easy-to-use network emulation tool that provides real-world scenarios for application development testing

(877) 474-8672



Better Virtualized Performance

Akorri BalancePoint 2.0 Monitors & Analyzes Resource Usage

TO MAKE THE MOST of a company's resources, it is necessary to monitor and manage the resources that make up a virtualized data center. Akorri's BalancePoint software can help do just that with a full set of tools that monitor and analyze the performance and usage of resources.

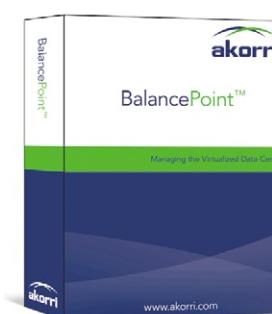
Akorri's Version 2.0 of BalancePoint, a pre-configured virtual appliance, comes complete with an operating system. New features include GuidePoint PI (Performance Index), Scorecard Reporting, and storage virtualization support.

The GuidePoint PI offers a number of quantitative performance criteria that assists IT in improving data center performance by providing information about the type of storage hardware that is necessary to support application workloads.

Not only can this tool help IT staff improve data center performance, but the GuidePoint PI can also assist in making decisions about future purchases. For example, a PI of 100 indicates that servers, storage, and other components of the company's infrastructure are well

suit to the demands of its applications. If the PI is higher than 100, it indicates that the company's resources are taxed. Performance may suffer, so it may be necessary to purchase additional resources for the data center. If the PI is lower than 100, the company might make better use of its extensive resources by consolidating servers or implementing tiered storage.

Another new feature is the Scorecard Reporting tool, which provides performance and usage information for app services, ESX, physical servers, storage components, and virtual machines. BalancePoint also supports IBM SVC and HDS UVM, which lets the software operate across domains and support virtualized servers and virtualized storage.



Akorri BalancePoint 2.0

Starts at \$12,500

A virtual appliance that includes a full set of tools for analyzing the performance, usage, and needs of the data center

(978) 431-1200
www.akorri.com



Archive & Encrypt Email

Let Intermedia's Secure Mail Do All The Heavy Lifting

EMAIL IS YOUR company's most vital communications resource, yet most SMEs get by without adequate protections in place to safeguard the sensitive and business-critical data that emails contain. Federal and international law dictates how organizations in regulated industries should handle email. But even unregulated industries can face legal consequences if proper precautions are not taken. To solve this problem, Intermedia introduced its Secure Mail SaaS (software as a service) offering for Microsoft Exchange, designed to handle email compliance and encryption needs throughout the data life cycle.

Secure Mail helps organizations comply with mandates passed by the U.S. Securities and Exchange Commission, as well as Sarbox, HIPAA, and recent updates to the



Intermedia Secure Mail's security question ensures only the intended recipient gets your message.

FRCP (Federal Rules of Civil Procedure). Secure Mail's encryption scheme also prevents data loss that can lead to lawsuits.

As a SaaS, Secure Mail lets users sidestep deployment, integration, and management concerns and costs that plague traditional PKI (Public Key Infrastructure) encryption platforms.

When users send emails via Secure Mail, they lock the messages with a password question and then Secure Mail encrypts and sends the message. At that point, Secure Mail subscribers can view the email in Outlook where it is automatically decrypted and opened. For nonsubscribers, the email shows up with a link to Intermedia's servers. Upon entering the correct password from a secure Web connection, Secure Mail opens the email in Outlook and archives it for compliance. Using this unobtrusive method, Secure Mail recipients can view emails without installing Intermedia's software.

Intermedia Secure Mail

\$7.95 per mailbox per month plus a one-time setup fee of \$7.95 per mailbox

A hosted email encryption and archiving SaaS platform
(800) 379-7729

www.intermedia.net



INTERMEDIA
BETTER BUSINESS EMAIL™

PRODUCT OF THE WEEK

Reign In Your Internet Bandwidth

NetEqualizer Provides Bandwidth Shaping For Voice & Data Networks

by Chris A. MacKinnon

• • •

IS YOUR NETWORK CONSTANTLY absorbing too much Internet traffic? Do you periodically send out company memos asking your staff to ease up on nonwork-related Internet surfing? Do you wish you had something in place to help prioritize your company's bandwidth? If you answered yes to any of these questions, you are not alone. Network administrators from around the globe are dealing with competing demands for network resources and congestion. If this is true in your case, your small to midsized enterprise may be in need of a bandwidth shaper (also known as a traffic shaper).

Enter NetEqualizer APconnections (800/918-2763; www.netequalizer.com), a traffic-shaping solution provider, has stepped up with its NetEqualizer appliances, which optimize critical network bandwidth resources. In a nutshell, the NetEqualizer gives priority where it is due: to your high-priority business applications, including VoIP, CRM, and

ERP. APconnections says it is a turnkey traffic-shaping solution that is affordable and easy to install.

Art Reisman, APconnections' CTO, says most IT managers start with, "I need to know what traffic is on my network, and I want a tool to tell me." Reisman elaborates, "What they may not realize is that network traffic applications change every day, and if they pay \$10,000-plus for a tool that can find 70% of their traffic accurately, that is not what you would expect for that kind of investment. That is why we don't pretend to find everything. What we do promise is that we will fix congestion issues and keep customers happy with our simple, yet effective, methods of traffic by fairness."

Reisman says APconnections has been refining its techniques for four-plus years and continues to receive validation every day ("from IT managers that have tried everything else under the sun") that the company's bandwidth-shaping solution(s) is the "way to go."

Mark Sunner, chief security analyst for MessageLabs (www.messagelabs.com), says bandwidth shaping is necessary in a dynamic protocol environment. He explains, "An example of this is VoIP, which is extremely time-sensitive. By using bandwidth shaping, it is possible to guarantee a fixed amount of bandwidth and network resources to VoIP calls, thus removing latency issues. Within the corporate environment, it may be desirable to control or throttle the use of other protocols (like P2P networking) as part of an overall corporate policy." Sunner says by increasing the priority of relevant business-critical traffic through their networks, enterprises can ensure that required central processing is done in a timely manner—without timeouts.

David Novak, co-author of "A Traffic Shaping Model for Optimizing Network Operations" and assistant professor at the University of Vermont, says the primary reason for employing traffic shaping is to

facilitate the management of scarce network resources. He comments, "Traffic shaping can allow network managers to set policies that control traffic flows and regulate access by different applications and user types to a finite amount of bandwidth. Managers can prioritize specific applications and types of traffic, and they can do this in a very granular way that corresponds to the different layers of the OSI model."



Traffic shaping allows network managers a great deal of control in setting and enforcing specific policies they feel are critical in effectively managing network resources."

Affordability Meets Quality

According to Sunner, nowadays there are approximately 30 companies delivering bandwidth-managing solutions in the market. So how does the NetEqualizer differ from its competitors? Reisman answers, "We base our traffic-shaping decisions based on usage patterns and human factors which do not change. For example, we know what a VoIP call looks like in general, so we give it priority. We also know what BitTorrents or viruses look like in general, so we put the brakes on them." Reisman says the benefit of the NetEqualizer is that it works today, tomorrow, or three years from now, without constant license upgrades.

Is the NetEqualizer unique in any way? Yes, Reisman says, "The price point, for starters. It bridges the gap between the very basic tools and the higher-end tools without the high-end prices. Our product also comes with some of the brightest engineers in the industry behind it. I would highly recommend that you chat with them first, before making any important decisions. It is important to note that our company does not employ any commissioned sales people."

The NetEqualizer appliances are designed primarily for voice and data networks and are available in configurations ranging from 2Mbps up to 300Mbps. They can be deployed in corporate or service provider

networks. Reisman says IT managers will be happy to know that they literally install in minutes. He says they shape traffic based on built-in fairness rules, which balances network traffic without managing policy libraries or requiring any changes to existing network infrastructure.

Bandwidth-Shaping Tidbits

Novak says there is a great deal of discussion in the industry around bandwidth-intensive applications (especially about P2P applications), the ports these applications use, and the characteristics of these traffic types. He comments, "Network engineers do not have to spend as much time trying to identify and classify various types of unknown traffic. It appears that in most cases, the focus of the management team has moved away from the reactionary panic of simply keeping the network operational to a focus on improving and hopefully optimizing network operations through traffic shaping. This is a result of a better understanding of how many of the newer

Internet-based applications work and the risks associated with unrestricted access."

According to Sunner, bandwidth-shaping solutions date from when QoS was first defined in 1994 in the field of telephony and extended to data networking in 1998. He says the first companies to start implementing bandwidth shaping started to appear in the mid-'90s.

So why should small to midsized enterprises seriously consider APconnections' NetEqualizer appliances? Reisman is quick to reply, "If they manage a network that is constantly sucking up Internet bandwidth, they should give us a serious look." □

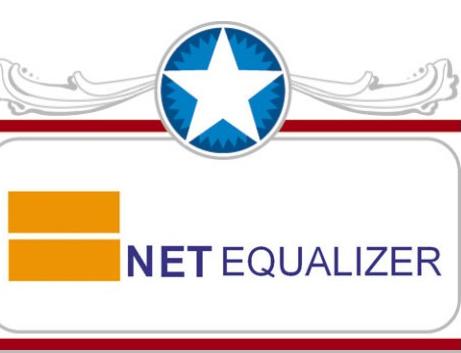
BANDWIDTH LIMITING

NetEqualizer limits bandwidth by:

- Favoring bandwidth for Web browsing, chat, and email
- Host (supporting up to 4,000 individual hard limits)
- Subnet
- MAC address
- Port
- VLAN

NetEqualizer also provides control and containment for all common P2P applications, including Bearshare, ftp, Gnutella, IMAP, GNUTELLA, LimeWire, live365, Morpheus, Musicmatch, Phex, POP3, SMTP, Swapper, XoloX, and KAZAA.

SOURCE: APCONNECTIONS



PRODUCT OF THE WEEK

APCONNECTIONS NETEQUALIZER

Description: Bandwidth-shaping appliances designed for voice and data networks

Interesting fact: Customers can build a redundant configuration by configuring two NetEqualizers running parallel.

(800) 918-2763
www.netequalizer.com

STORAGE

FEBRUARY 22, 2008

Solidify Your Storage

BiTMICRO's 1.6TB SSD Has Ultra320 SCSI Interface

LACKING A HARD DRIVE's mechanical latency, an SSD (solid-state disk) is much faster to respond to data requests in the multi-user, multitasking data center environment. SSDs are more shock- and vibration-resistant than hard drives and feature better temperature tolerances, lower power consumption, and silent and vibration-free operation. As prices fall and capacities increase, data centers will come to rely more and more on SSDs and other solid-state storage options.

Last fall, BiTMICRO Networks announced a 4Gbps Fibre Channel SSD in a 3.5-inch hard drive form factor with an astounding top capacity of 1.6TB. Now, the company has unveiled a variant with an Ultra320 SCSI interface. The enterprise-class drive is intended for business, military, and industrial applications.

The E-Disk Altima E3S320 family will come in capacities from 16GB to 1.6TB.



The 16GB to 640GB models will have a 1-inch height, making them no larger than a typical 3.5-inch-wide hard drive. The larger versions will be 1.744 inches tall.

Inside, the E-Disk Altima uses SLC (single-level cell) NAND flash memory. It can sustain data transfers at up to 230MBps, the company says. Of course, being an SSD, the drive's throughput figure of up to 30,000IOps (inputs/outputs per second) is what really blows any hard drive out of the water.

BiTMICRO uses proprietary wear-leveling algorithms to extend the E-Disk Altima's life, as well as custom error correction code to preserve its data integrity. The drive employs the company's proprietary

EDSA (Enhanced Datamover and Storage Accelerator) and LUNETA (Logical Unifier of Extensive Transfer Arrays) controllers.

The company should begin sampling the E-Disk Altima E3S320 in Q2 of this year. Volume shipments should follow in the Q3.

BiTMICRO E-Disk Altima E3S320

About \$40 per gigabyte

High-capacity, rugged, low-power server storage in a standard hard drive form factor

(510) 623-2341



Product Releases

CLIENTS

■ Even with the lights on, **BenQ's** new high-lumen DLP projectors deliver. The 5,000-ANSI lumen SP870 features a five-segment color wheel, an interference-free wired remote, and a standard-ratio, 1,024 x 768 XGA picture. Meanwhile, the 4,000-lumen SP831 is a widescreen, 1,280 x 768 WXGA projector with split-screen capability and a six-segment color wheel. Both models offer HDCP and HDTV compatibility, Windows Vista Basic certification, a 2,000:1 contrast ratio, and BenQ's BrilliantColor Technology.

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■ **Dell** introduced its first ruggedized laptop, the Latitude XFR D630, which is intended for government and commercial customers who must use their computers in the elements. It delivers seamless integration into the existing infrastructure and provides durability without compromising performance. The XFR D630 is capable of operating in extreme heat, cold, and moisture, as well as altitude. The Latitude includes ExpressCharge fast-charge batteries, an outdoor readable screen at 500 nits, shock-isolated mounting to protect the hard drives and LCD monitor, dual-locking butterfly mechanisms, and a sealed keyboard. The Dell Latitude XFR D630 is available in the United States for \$3,899.

....
■ **Kofax** has announced the release of Ascent Capture, now called Kofax Capture. Kofax Capture mechanizes business processes by digitizing paper and electronic documents and forms. Kofax Capture then changes content into data, providing the ensuing information to an organization's business applications and repositories. Kofax Capture 8.0's new features include a

disaster recovery function, support for more dependable deployments at multiple sites, and 100% data retention by allowing documents to automatically be rerouted to other sites in the event that a site is no longer operational.

....
■ **Kyocera** has unveiled the FS-1300D, a new ECOSYS monochrome laser printer that provides high-quality prints in a six-second first print-out time, along with 30ppm print speeds. The FS-1300D also includes standard duplex for double-sided printing to perform jobs both efficiently and cost-effectively. The compact desktop printer has a standard 32MB of memory (upgradeable to 544MB), and it is Energy Star-Compliant. Featuring a new LED panel, users can take advantage of color indicators that show the printer's status, and the Status Monitor conveys information for the printer to the user's desktop.

MESSAGING & TELEPHONY

■ **Sherpa** announced Archive Attender for Exchange 3.2, which improves upon previous versions' PST archiving functionality and processing while reducing the time and cost of administration. Archive Attender assists companies in email storage, security of information, and compliance regulations. Sherpa's newest service streamlines data storage and retrieval into a central location, automatically assigning tags to PST files based on users, to reduce time administrators spend on the files. Archive Attender 3.2 also allows administrators to schedule PST archiving periods to cooperate with the company's workflow, such as after-hours or on the weekends.

....

■ **Trend Micro** has launched TMMA (Trend Micro Message Archiver), which provides on-demand email searching functions within Microsoft Outlook. With TMMA, it is possible to search archived messages without contacting a company's IT department. The product also incorporates digital fingerprinting and encryption to prevent message tampering and ensure compliance. TMMA includes a privacy guard, which monitors and logs email searches and audits that information for a designated data guardian within the company. Pricing is determined by seat count, with volume discounts incorporated. Pricing starts at \$33.70 per user for 501 to 1,000 seats. The first year of maintenance is included in the price of TMMA. A 30-day trial is available for download from Trend Micro's Web site.

NETWORKING & VPN

■ **Accelion** has released the Accelion Managed File Transfer System for automated information transportation. Accelion uses email to deploy up-to-date information in a timely manner. The Accelion Automation Agent scans file directories and distributes updated business data to targeted corporate users. Also included is the Envelope Designer for the creation and capture of meta-data within files; any user can customize a checklist to accompany uploaded images, such as multimedia credits, from a file. The Accelion Managed Transfer System 7.0 is available as a hardware appliance or virtual appliance.

....
■ **Advantech's** Industrial Automation Group describes its compact EKI-7656C switch as "industrially hardened." The

switch offers 16 10/100Base-TX Ethernet ports, plus two Gigabit ports for copper connections or optional SFP (small form-factor pluggable) single-mode or multimode modules. Advantech's X-Ring features 10ms failover protection in case of a fiber cable fault or other issue. It also provides QoS and other advanced traffic control features for maximum speed and uptime.

....
■ **Cisco** released the Cisco ASR (Aggregation Services Routers) 1000 Series, a line of routers designed to help service providers and enterprise edge networks simultaneously host an array of resource-intensive integrated data, voice, and video services. The ASR 1000 Series features software virtualization to enable "instant-on" provisioning and simultaneous use of a wide range of service functionality, including firewall, IP security VPNs, deep-packet inspection, and Session Border Control. The Cisco ASR 1000 Series is run by the Cisco QuantumFlow Processor, which offers a programmable processing engine. Additionally, the ASR 1000 Series comes with Cisco IOS EX software to provide a virtualized Cisco IOS implementation for a rich Cisco IOS edge feature set.

....
■ **Lancope** announced the NEL (NetFlow Event Logging) Gateway, an appliance that supports the Cisco ASR 1000 Series routers' high-speed firewall. Designed to generate syslog for the Cisco ASR 1000, Lancope's NEL Gateway saves ASR 1000 Series system resources, scales to 10G networks, assists compliance initiatives through syslog fault tolerance and destination management, and reports event volume and overall health of the NEL-exporting

Go to Page 18

TECHNICAL FURNITURE & RACKING SYSTEMS

An original equipment manufacturer since its inception in 1992, **Hergo** remains THE trusted source for technical furniture.

Open Racking Systems



Command Center Furniture



Relay Racks



Rack Mount Enclosures



Mobile Computer Carts



LCD Monitor Arms



Training/Studio Desks



hergo®

888.222.7270 | www.hergo.com

56-01 55th Avenue, Maspeth, NY 11378 | Tel: 888.222.7270 | Fax: 888.410.0671

Hergo is an approved supplier to all branches of the U.S. Government.
GSA Contract # GS-29F-0133G

CPS Automatic Power Cycle Keeps Equipment Online

New Device Automatically Power Cycles Frozen Devices



WHEN IT COMES TO appliances that control network traffic, ordinary monitoring tools aren't enough. Sure, the monitoring system alerts you to traffic disruptions, but the entire network remains down until you're able to reach the frozen router or modem and restart the power cycle. To speed up the process, CPS (Computer Peripheral Systems) offers the APC (Automatic Power Cycle) appliance, which monitors network status and automatically restarts power to a frozen device.

CPS built the APC unit with DHCP routers and modems in mind for plug-and-play applications, but customers can use the device to cycle power for any critical network component. The APC unit sits between the AC outlet and the selected devices. It regularly pings two IP addresses to confirm the network's Internet connection is functioning. When the APC determines a device has frozen (due to ping failure for both IP addresses), it recycles power to its AC OUT outlet for five seconds.

Customers can configure multiple APC unit features by connecting the device to a PC. The PC must run a terminal emulation program. You can change the primary and

secondary ping addresses, enable or disable ping-out capabilities, adjust the ping interval from its 2-minute default, or extend

the power-off countdown from the default five seconds up to 90 seconds and more.

The APC unit also supports out-of-band backup with its Ring Reboot feature. Customers can ring the APC device over a DSL or phone line to initiate a power reset. The APC device resets after six rings by default, but customers can change the ring number via the unit's serial connection.

The APC appliance is small and light. It has two AC receptacles (one IN, one OUT), one RJ-45 port, and three RJ-11 ports. The device also sports a Power/Reset button and a rocker for the 15-Amp circuit breaker, as well as status LEDs. The device supports 110VAC to 240VAC power inputs.

CPS Automatic Power Cycle

\$179

Resets AC power to hung DSL routers, modems, and other devices

(800) 888-0051

www.cpscom.com

 Computer Peripheral Systems, Inc.

Enhance Technology Adds To Its UltraStor RS Line

RS16 IP-4 Handles High-Impact, High-Volume Tasks

ENHANCE TECHNOLOGY'S RS16 IP-4, the newest member of the company's UltraStor RS Series of storage products, gives IT departments a host-independent, transparent, and driverless method for adding RAID (0, 1, 3, 5, 6)-protected storage to existing infrastructures, regardless of the operating system or hardware already in place.

Supporting Microsoft VSS and coming in a 3U, 16-disk modular rack design, the RS16 IP-4 offers such features as a built-in 64-bit RAID controller, up to 2GB of cache and 3Gbps SATA disks. Advanced features available via the RS232 interface include multiple array settings and SNMP and security options.

Constructed to handle high-volume and high-impact network storage tasks, including those related to video broadcasting and backup and recovery applications, the UltraStor RS16 IP-4 also includes an ability to let administrators configure the appliance in just minutes. Additionally, auto-configuration abilities are available via a rear-located LCD control panel, and remote Web browser-based management and monitoring are also possible. An included menu screen allows access to set up the RS16 IP-4's configurations, as well as change settings as storage needs change

over time. Physical protection comes in the way of two included redundant, hot-swappable power supplies and two fans to guard against hardware-failure interruptions.

Beyond the quad Gigabit Ethernet ports, the RS16 IP-4 also includes N-Way Mirror and enterprise-class Snapshot for point-in-time recovery protection against accidental deletion of data.

The appliance is suitable for Microsoft Exchange and SQL Server environments, as well as disk-to-disk backup, database pools, image acquisition, near-line storage, data centers, media and asset libraries, and shared SANs. Dynamic online RAID expansion is possible without total system downtime being required.

Enhance Technology UltraStor RS16 IP-4

\$4,750

An intelligent iSCSI RAID system that includes a 64-bit RAID engine and up to 2GB of cache and supports 3Gbps SATA disks

(562) 777-3488

www.enhance-tech.com

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Where Storage Begins

Product Releases

Continued from Page 17

router. The NEL Gateway uses NetFlow v9 messaging protocol to receive network address translations, identity information, firewall pass/fail records, alerts, and other firewall event data. The appliance also features a Web-based user interface to help customers configure and manage NEL log sources and destinations.

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■ **LinMin** has made its first product available: LBMP (LinMin Bare Metal Provisioning) 5.0. LBMP features include remote provisioning and imaging of servers, blades, appliances, PCs, and VMs; rapid system deployment, repurposing, and recovery; and simplified installation. LBMP is designed for Linux Systems and can configure customer-specified applications. Hardware and software testing is now more cost-effective due to quick repurposing of physical and virtual environments. The price of an annual subscription to LBMP is \$100 for 10 clients, \$400 for 100 client systems, and \$750 for 250 systems.

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■ API (Application Protocol Interface) 3.0, the latest iteration of **SoftLayer's** open-source API, is now available. The interface offers system-to-system access to the many backend features of SoftLayer's Customer Portal. Network nodes that are mobile and offsite, such as PDAs and smartphones, can connect securely to any system. Added features from the previous version of API include more compatibility with .NET, Java, and Ruby on Rails and deeper integration with SoftLayer's core Portal SOA design. API 3.0 can integrate with any third-party or custom application and interface with SOAP and XML-RPC. For SoftLayer customers, API 3.0 is free.

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■ **WatchGuard Technologies** unveiled two new SSL VPN remote-access appliances. The WatchGuard SSL 1000 and WatchGuard SSL 500 are optimized for today's mobile devices, platforms, and network authentication options. The WatchGuard SSL 1000 and 500 use Web browsers or thin clients, endpoint integrity checking, network interface control, and virtual desktops and session cleanup to deliver business applications to the user for maximum productivity. Key features of both appliances include clientless SSL VPN access, strong authentication, single sign-on, federated identity, and endpoint integrity. Many factors of authentication are supported, including SMS; software-based two-factor authentication; and token support for RSA, VASCO, and VeriSign. In addition, administrative and management features allow for real-time scanning, automatic session cleanup, and audit capabilities. The WatchGuard SSL 1000 and 500 appliances will be available next month.

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■ **WildPackets** launched WatchPoint, a Web-based monitoring and reporting tool that gives IT managers and engineers complete visibility over highly complex and distributed networks. WatchPoint aggregates statistical information from multiple sources, including OmniEngines, as well as common network devices that support NetFlow and sFlow. WatchPoint allows IT staff to monitor the entire network from a single dashboard and respond immediately to network issues before they become problems. In addition, WatchPoint can collect and summarize data from WildPackets OmniEngines, NetFlow-supported devices, and sFlow-supported devices. WatchPoint also delivers, aggregates, and displays statistical data from OmniEngines that is not available from NetFlow- and sFlow-supported devices. WatchPoint also includes analysis gadgets such as network utilization/RangeMap.

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Geographic Map, TreeMap, Top Ports, TopNodes, and Top Collectors. WatchPoint supports Internet Explorer and Firefox Web browsers and will be available in the second quarter.

SECURITY

■ **Breach Security** launched the newest iteration of its WebDefend Web application security appliance designed to eliminate Web application resource abuse and DoS attacks. WebDefend 3.2 now automatically detects these attacks, automatically generates reports, and delivers high availability over WANs. Users can configure the WebDefend appliance to monitor up to four independent network segments. WebDefend supports large-scale sensor deployments and features six network interfaces and an updated signature database capable of defending against SQL injections and cross-site scripting. WebDefend also comes with automatic upgrade to simplify the process of upgrading the unit.

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■ **Secure Computing** released SecurityReporter, a SEM reporting product for Sidewinder and SnapGear firewall and UTM appliances. The data provided by SecurityReporter helps companies ensure security and compliance. Report templates are included for Sarbox, PCI DSS, HIPAA, Gramm-Leach-Bliley Act, and FISMA. The product also includes management and audit reports and multiple language support. SecurityReporter can even report on as many as thousands of global Secure Computing Network Gateway Security appliances. Secure Computing has designed SecurityReporter to prioritize actionable data according to the impact that it will have on a business so that the most critical problems may be addressed first. SecurityReporter is now included with all Sidewinder and SnapGear appliances.

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■ Sun Role Manager software, formerly known as Vaau RBACx, is now available from **Sun Microsystems**. The software facilitates control compliance, so customers can automate and streamline control compliance access. Sun Role Manager is part of Sun Microsystems' GRC (Governance, Risk, and Compliance) platform, which is designed to help companies manage identities, auditing, and compliance. Identity management issues, including access management, federation, Web services security, and auditing will be covered under the GRC platform.

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■ **Uniloc** has announced StrongPoint, a device-based IAM (Identity and Access Management) appliance aimed at infrastructure security. Using device fingerprinting, the appliance secures private networks between a StrongPoint Server at the NOC (Network Operations Center) and StrongPoint appliances in field controls for SCADA networks. The use of fingerprinting limits access to authorized staff and designated computers, which forces hackers to be on an authorized PC to impersonate an authorized user. Beyond providing notifications for authorized VPN connection attempts, StrongPoint guards against malicious code threats to protect against vulnerabilities. StrongPoint is available in limited release, with a general release planned for Q3.

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■ **Websense** introduced new messaging security solutions to protect from email security threats and provide better regulatory and policy compliance capabilities. The new Websense Hybrid Email Security provides inbound threat protection with minimal administration and significant

Product Releases

bandwidth savings, as well as deep content inspection of outbound emails with the granular control of on-premise software. The new version of Websense Email Security (formerly known as SurfControl Email Filter) features more than 100 content and compliance dictionaries, augmented with additional compliance dictionaries from Websense Data Security Suite. Websense's on-demand messaging security solution, Websense Hosted Email Security (formerly known as SurfControl MailControl), integrates the threat intelligence gathered from Websense Hosted Security solutions with Websense ThreatSeeker technology. Websense has also added training and certification for both Websense Hosted Email Security and Websense Email Security. In the second quarter of this year, Websense will offer channel partners in-person training courses, as well as two-day instructor-led classes for Websense Email Security. Websense Email Security version 6.1 will be available in the second quarter.

STORAGE

■ You don't have to give up functionality to pay a reasonable cost—that's **Addonics'** philosophy with its Storage Rack (SR380S). This 4U chassis offers room for nine 3.5-inch hard drives or 5.25-inch optical drives in any combination, with hardware encryption or without. Twin 90mm cooling fans and a thermal management card ensure proper ventilation. The Storage Rack starts at \$329. A version with a redundant power supply and a hardware port multiplier sells for \$769.

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■ **BlueArc** introduced the BlueArc Titan 3000 unified storage platform, ideally suited to data-intensive industries, such as Internet services, life sciences, entertainment, oil and gas exploration, design and simulation, and electronic discovery. The BlueArc Titan 3000 series can grow as needed with usable file system capacity of up to 256TB. The Titan 3000 series also includes an open API, which lets partners and customers develop applications that are capable of tapping into the Titan's software and hardware capabilities. The Titan 3200 has a maximum throughput of 20Gbps and a maximum usable capacity of up to 4PB. The Titan 3100 offers a maximum throughput of 10Gbps and maximum usable capacity of up to 2PB.

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■ **Bull** introduced its StoreWay Calypso software, which is an integrated data protection and management platform. StoreWay Calypso's modular design lets users apply it to large enterprise deployments across a wide range of server and storage infrastructures. The offering handles the data backup, archiving, recovery, and replication tasks. The software also handles search queries with ease, making it valuable for data retrieval purposes. Supported applications include Microsoft Exchange, Lotus Notes, Oracle, and Microsoft SharePoint. The basic configuration supports the tape-based backup of a single Windows server.

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■ **Enhance Technology** announced the R4 and R8 MS (Mini-SAS) storage arrays. The R4 MS is a 1U 4-disk rackmount storage system and the R8 MS is a 2U 8-disk system. Designed for hardware compatibility with current SAS or SATA host-based HBAs, the EnhanceRACK R4 and R8 include the Mini-SAS SFF8088 host interface and are integrated with SAS/SATA II hard disk-compatible backplanes, which let customers take advantage of SAS disks or high-capacity SATA disks. The R4 and R8 MS come standard on EnhanceRACK

rackmount enclosures that feature fan-failed LEDs and an alarm with mute button, as well as individual power and status LED indicators for each drive bay.

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■ **Iomega** has released the Iomega REV 120GB Backup Drive, a third-generation device with REV technology. The Iomega REV 120GB Backup Drive is suited for SMEs, as well as remote work groups. The new REV technology incorporated into the Iomega REV 120GB Backup Drive offers more native capacity, faster random access to files, and quicker backups and restores. REV drives provide limitless storage with each 120GB REV disk holding approximately 48,000 photos, 2,000 hours of music, or 12 hours of high-definition video.

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■ **Oracle** has released Secure Backup 10.2, a tape backup product for Oracle databases and NAS storage devices. This release of Secure Backup includes policy-based encryption at the domain, host, backup, and tape levels via AES 128/192/256 encryption algorithms. Additionally, Secure Backup offers automated management of all encryption keys associated with tape backups, with keys centrally located on a Secure Backup Administrative Server that manages decryption during restoration. Secure Backup 10.2 is available for all editions of Oracle Database 11g and Oracle Database 10g at \$3,000 per physical tape drive. Oracle Secure Backup Express is free for one database server attached to a single tape drive.

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■ **Seagate** announced the launch of its Cheetah 15K.6 hard drive, a 3.5-inch drive with a 28% increase in data transfer rates combined with 61% less consumption of power compared to previous generations. Cheetah 15K.6 is available in 450GB, 300GB, and 147GB storage capacities with a choice of SAS or Fibre Channel interfaces, a five-year warranty, and Seagate's PowerTrim technology, designed to optimize power consumption at all levels of activity. Cheetah 15K.6 lowers idle and operational power requirements from its predecessors.

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■ **Verari** has announced the release of the Verari FOREST container solution. Functioning as a portable data center, the Verari Forest container solution can house up to 1,400 blade-based compute servers or 12PB of storage through Verari's Bladerack 2 X-Series platforms. Using the Vertical Cooling Technology, Verari FOREST can improve power efficiency by supporting networking equipment and rack-mount servers. According to Verari CEO David B. Wright, "The FOREST container solution is ideal for companies in need of space-saving enterprise computing with increased energy-efficient capacity. We've eliminated the need for expensive real estate to house a data center installation, as well as the permits to build them."

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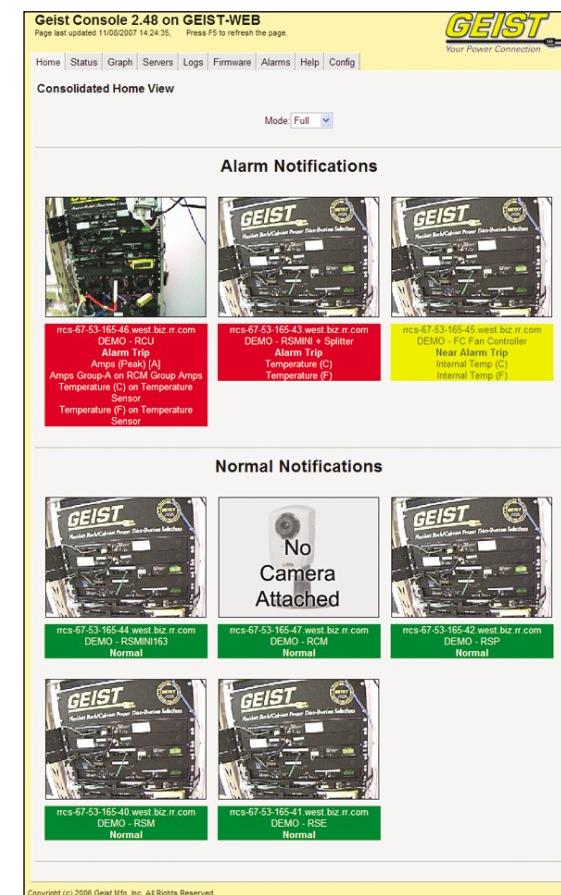
■ **Xyratex** has released two enhancements to its RAID products. These include the F6412E controller, which represents an evolution from the company's previous 5000 RAID controllers, and Advanced Power Management software. Xyratex says the F6412E delivers up to twice the performance of the previous-generation controller while minimizing electronic waste through its battery design that offers a service life of up to 10 years. The APM software, meanwhile, saves up to 40% in power dissipation by automatically spinning down disk drives. The APM software will appear first in the 4U 48-drive F5404E RAID system and then in Xyratex's other RAID family products by mid-2008.

PHYSICAL INFRASTRUCTURE

MARCH 7, 2008

How Do You Know If Your Data Center Is Green?

Geist RacSense Console Software Can Provide Real-Time Updates On Equipment Conditions



Each monitored product is displayed with a color-coded status bar for easy visual indication of alarm or normal readings, along with a Web cam image associated with the corresponding unit.

"IT'S NOT EASY bein' green," according to a popular 1970s song by Kermit the Frog. Today, most data center managers would agree. With a myriad of information coming at managers every day, how can you decipher what information is needed?

One way is to gather as much information as you can about your data center and then look for trends in data over time. As changes are made to make data centers more efficient, the data can be quantified and presented to management as proof things are changing for the better.

How do managers gather all of this data? That's where Geist Manufacturing can help. Geist offers a line of products specifically designed to gather pertinent power and environmental data center information. Geist also offers a software product to neatly bundle collected information, analyze it, and help you make informed decisions related to power consumption by both IT and facilities equipment. Not only can you "green up," you can also increase your ROI with use of RSCS-2 (RacSense Console Software).

Aggregate Data

RSCS-2 offers an inexpensive way to aggregate data from any of Geist's intelligent power distribution products, including remote power monitoring, environmental monitoring, variable speed fan control, and remote outlet control units.

Geist RacSense Console Software (RSCS-2)

\$513.97 (free two-device version available)

Aggregates data from any of Geist's intelligent power distribution products, including remote power monitoring, environmental monitoring, variable speed fan control, and remote outlet control units

(800) 432-3219

www.geistmfg.com

www.racsense.com



Geist's RSCS-2 software costs \$513.97 but is often included free of charge with a substantial purchase of Geist hardware.

The ability to monitor and update up to 100 Geist Web-enabled devices from a single IP address makes the RSCS-2 an invaluable tool. Each monitored product is displayed with a color-coded status bar for easy visual indication of alarm or normal readings, along with a Web cam image associated with the corresponding unit.

Real-time measurement data for individual readings, such as Temperature or Real Power, can be displayed in bar graph format, allowing a data-center-wide view of specific conditions. These same readings can be viewed by comparison graphs via an aggregate view, enabling instant identification of locations that are underperforming or affected during specific time periods. Trend analysis can also show data center hot spots or help in re-creation of notable events. Each graphed variable provides click-through access back to the main unit for user convenience.

Push Updates

The RSCS-2's push update feature offers an easy way to update firmware and alarm settings for your installed Geist products. This feature can be set to automatically update RacSense units to the most current version of firmware, eliminating the need for technicians to spend hours going to each product when new firmware is released. This lets users stay up-to-date with the latest features and enhancements with minimal effort.

The RSCS-2 software also includes standard pages to help with configuration, alarm management, and logged data management, as well as a full help menu with detailed descriptions of each page and its functions. A free, two-device version (RSC Lite Software) is available for testing and qualification. This can be downloaded from the RacSense Web site at www.racsense.com/support/#RSC_Software.

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Environmental Control

Dickson's Graph-At-A-Glance Monitors Temperature & Humidity

MAINTAINING ACCEPTABLE operating conditions is essential in order to ensure not only that hardware operates properly but also that equipment is not unnecessarily taxed so that a company can get the maximum life span from its data center resources. Dickson's latest data loggers can help ensure that hardware operates under ideal conditions.

The company's new Graph-at-a-Glance Flat Panel Temperature and Humidity Data Loggers provide real-time feedback to a company about environmental conditions. With the new data loggers, IT personnel can easily oversee and manage the temperature and humidity in a company's data center.

These new products from Dickson are paperless chart recorders with integrated digital graphing tools that provide a visual representation of environmental conditions and patterns that may have a

detrimental effect on a company's hardware and data. Each Dickson data logger has a 3.4- x 4.5-inch display for easy viewing. The products also provide options for users to configure the display settings.

The Graph-at-a-Glance Flat Panel Temperature and Humidity Data Loggers offer both audio and visual alarms to notify IT staff immediately when there is a problem with the environmental conditions in the data center.

The Graph-at-a-Glance Data Loggers have 32KB of built-in storage capacity and also include support for additional flash memory. They offer USB-enabled triple-speed downloading. With these products, IT personnel can download temperature and humidity data so that they can not only monitor conditions but also perform further analysis of the data center's environmental conditions.

Dickson provides two models that monitor both temperature and humidity, the FH320 and FH325, and two models that monitor only temperature, the FT300 and FT325. In addition, any of the models are also available with Dickson's Basic NIST 1-Point NIST Calibration for an additional \$99. NIST Calibration provides accuracy and regulatory compliance for the data loggers.



Dickson Graph-at-a-Glance Flat-Panel Temperature And Humidity Data Loggers

Starts at \$299

Data loggers that monitor and evaluate environmental conditions in data centers

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DICKSON

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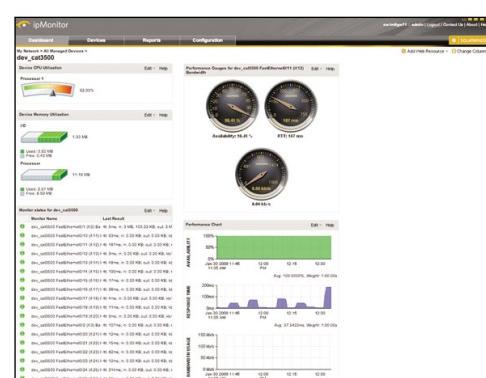
ipMonitor v9.0 Features SmartMonitor Technology

WHEN A PRODUCT COMES ALONG that automates common tasks and makes monitoring critical systems easier, IT takes notice. That's the case with SolarWinds' ipMonitor network, server, and application monitoring system.

The ipMonitor Web-based utility features an easy-to-use graphical interface and concise dashboard views that deliver insight into the health of the network and application infrastructure.

The software comes with more than 50 built-in monitors for reporting on routers, switches, and servers. Built-in app monitors include Active Directory, DNS, Microsoft Exchange, FTP, Web, IMAP, and SMTP.

Other capabilities include rapid discovery of IP-based network devices, the



The Dashboard tab lets ipMonitor 9.0 users get a snapshot of resource utilization and network performance.

ability to group devices logically and dynamically, a network mapping capability that tracks data and lets users take corrective actions in the event of a failure, and automated recovery and remediation functions. Once a device is discovered, users can look up the device's attributes, query a server or device for a list of appropriate monitors that work with it, and manually add new monitors.

The ipMonitor v9.0's SmartMonitor capability recommends the best and most appropriate settings for analyzing the organization's specific application and network infrastructure, eliminating the task of manually selecting and tuning the monitors. Admins can also roll out ipMonitor v9.0 without an agent.

SolarWinds ipMonitor v9.0

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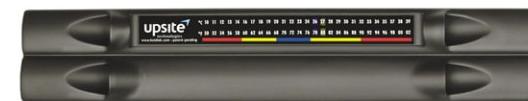
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- Reduction of the number and severity of hot spots within equipment cabinets
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- Potential for greening data centers

Upsite Technologies HotLok Blanking Panel

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Scalable, All-In-One Storage

StoreVault S550's Simplicity Lets You Concentrate On Business



TODAY'S SMALL TO midsized enterprise needs to be able to focus on one thing: growing their business. The S550 from StoreVault, a NetApp division, has that need in mind.

StoreVault's S550 includes a new chassis that can support drives from 250GB to 1TB, so you can start with as little as 1TB of storage and grow up to 12TB, as your business needs change, without having to add additional boxes or complexity. Support for both NAS and SAN lets you set up the S550 as a file server replacement or server virtualization platform.

The S550's embedded NetApp FlexVol technology means you can simply allocate and reallocate storage on the fly. And you can add storage—even as little as one drive at a time—without disrupting applications or users.

One of the best features of the S550 is that you can set up and configure the device in a matter of minutes, and you can easily manage, monitor, and update your storage without the need for storage specialists. The S550 supports all major vendors over multiple protocols.

The StoreVault Advanced Protection Architecture means your data is secure, and it uses technologies to ensure maximum availability. Plus, you can eliminate the headache of daily incremental backups. The S550's use of snapshots reduces your backup window and makes it possible to restore entire volumes by just touching a button. Snapshots can be integrated directly into Exchange and SQL applications, and you can even replicate files and LUNs to a remote S550 for offsite backup.

StoreVault S550

Starts at \$5,535

Scalable storage designed with simplified management and data protection features

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OPINIONS

INFO-TECH • INSIGHT

TCO: What's Old Is New

A colleague of mine recently posed an innocent question, "When did the concept of total cost of ownership emerge?" Several responses pointed to the actions of the IT analyst community in the mid-1980s. Another colleague said, "Phooey. We used TCO at UNIVAC in the 1970s." But the concept seems to be much older.

In Search Of TCO

The *New York Times* is always a good source for harnessing zeitgeist. The first technology article in the *Times* that mentions "total cost of ownership" dates from March 1995. It's called "The Executive Computer; A Dinosaur in Open Systems Clothing" and parrots the analyst lingo. It's about—no surprise—the AS/400. The classifieds are more interesting. An ad from July 16, 1967, lists total cost of ownership as a crucial skill for a "Support Systems Life Cycle Cost Analyst" for the aerospace industry. I should note that this ad predates the birth of the IT analyst industry by several years.

The academic literature also points to this era as the possible beginning for TCO. A 1976 article in the *Journal of Finance*, "Leasing, Buying, and the Cost of Capital Services," discusses the "total cost of ownership" for production machinery. More remarkably, a review in *Quality Progress* from 1968 notes, "Total cost of

ownership is being used profitably in the elevator industry."

OK, elevators aren't IT, but the concept certainly seems the same. So TCO dates back at least to the late 1960s, perhaps a result of free love and pervasive civil disobedience (as anyone with experience at UNIVAC could doubtless relate). But a little additional digging demonstrates that the concept is even older and appears in a few dusty books. "Principles of Engineering Economy" from 1938, for example, includes the term in the introduction and on pages 17 and 18. Most dramatically, however, "Manual of the American Railway Engineering Association"

GEORGE GOODALL

AUTHOR George Goodall has been in the information technology field for over 10 years. Prior to becoming a research analyst, Goodall was a consultant with the enterprise software company i2 Technologies. Since joining Info-Tech, Goodall has written on a variety of IT topics, including Internet telephony, NAS, and enterprise applications.



(1929) notes that, "in the event there is a surplus of power then the total cost of ownership should be multiplied by the ratio of the cost of repairs to the total."

Just How Old Is TCO?

After reveling in my discovery that TCO dates from at least 1929, a colleague noted

that the ancient Egyptians probably used the concept (assisted, no doubt, by some handy big iron from UNIVAC). I doubt that the Egyptians had the concept of TCO given their habit of making capital investments with extreme durability. The notion of "replacement period" doesn't make a lot of sense when we're talking about housing the eternal souls of living gods. And labor costs are largely moot for a nation of slaves.

The Greeks and Romans probably didn't really have TCO either. They divided the world of knowledge into three realms: episteme, knowledge of the world as best represented by mathematics; praxis, the applied knowledge of political leaders; and techne, the base knowledge of masons, weavers, and other artisans. As with the Egyptians, techne was the realm of slaves and was despised by the rest of society. This prejudice persisted through the collapse of the Roman Empire and through the Middle Ages. The medieval traditions of scholasticism and, later, humanism deprecated anything to do with technology. It wasn't until the introduction of gunpowder at the Battle of Crécy in 1346 and the rise of bastioned fortification to resist gunpowder artillery that technologists really started to

get the recognition, and compensation, with which we are now familiar.

TCO: "Revolution" In French

The concept of utility and efficiency, core principles of TCO, didn't emerge in the Renaissance. As in the realm of art and sculpture, technology was the product of

TCO dates back at least to the late 1960s, perhaps a result of free love and pervasive civil disobedience.

virtuosi, not to be repeated on a mass scale. I suspect that the base principles of TCO emerged with the French physiocrats of the late 18th century, such as Anne-Robert-Jacques Turgot or Françoise Quesnay. They established crucial elements, such as "investment capital" and "diminishing returns." Their concepts were subsequently expanded by Adam Smith in his "Wealth of Nations." They were crucial for the later institutionalization of engineering and science that occurred during the French revolutionary era, particularly the rationalization of the armories. Napoleon's engineers began to pay very close attention to issues like the effectiveness of cannons, how easily they were moved and repaired, and how long they lasted in active service. While they didn't call this process TCO, the core elements were certainly there.

So, if I had to guess, TCO dates not from the late 1980s but from the late 18th century. There's an important lesson in this. The key takeaway for me is that most good advice has a much longer history than we realize. Sometimes, it even predates UNIVAC. P

Send your comments to infotech@processor.com

STORAGE

FEBRUARY 1, 2008

Dell AX4-5: Simple, Scalable Storage

SAN Array Offers Affordable, Easy-To-Use Features



As SMEs GROW, they add branches and remote offices, which increase the need for data storage without spending more of the IT budget. The storage therefore must be simple to deploy and easy to manage. To meet the need for entry-level storage for small and medium-sized enterprises, Dell has released the AX4-5 series of SANs.

Data on the AX4-5 is designed to be protected anywhere—in the controller, on the drive, or on the data path. Further reliability is provided through continuous background disk consistency checking; mirrored cache; and cache destaging, which means in the event of a failure, data stored in cache can be moved to disk, protecting against loss or corruption. Deployment and operation are designed for simplicity with the EMC Navisphere Express user interface. For users with multiple EMC arrays, this software offers a "single pane of glass" type of management in addition to data replication and migration tools.

which is why the Dell AX4-5 is designed with scalable architecture and multiple drive options. The AX4-5 supports up to 60 drives on 64 hosts (which requires five enclosures), and with the EMC Navisphere Express, a user can add additional storage to the array in a short amount of time. Users can start with four drives and continue adding as greater storage needs arise. Supported servers include PowerEdge and PowerVault storage technologies.

The arrays support both Fibre Channel for 4GB architecture and iSCSI for IP networks, as well as SAS and SATA drives. This allows for tiered storage as users have the option of mixing drives to support high-performance needs, such as I/O applications, while using SATA drives for cost-effective storage. As needs arise, the AX4-5 series is designed to migrate data seamlessly and easily between different types of drives and RAID types.

Dell AX4-5

Starts at \$15,699

A storage array that supports up to 64 hosts and up to 60 drives across five enclosures

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www.dell.com

STORAGE

FEBRUARY 1, 2008

RAID 6 For Maximum Data Protection

Winchester Systems' FlashDisk SX-2302S Offers Up To 60TB Of Storage



WHEN YOU'RE DEALING with massive amounts of storage, a RAID 6 setup is ideal because your disk array can survive two drive failures, and it provides an added layer of protection when rebuilding a drive. The FlashDisk SX-2302S from Winchester Systems is a SAS hosted disk array with dual-parity RAID 6 to offer maximum data protection.

The FlashDisk SX-2302S includes dual hardware ASICs (one for each of the independent parity calculations in RAID 6), so the SX-2302S offers RAID 6 performance similar to what you would see in a disk array that uses RAID 5. According to Winchester, RAID 6 dual parity offers 500 to 30,000 times longer mean time to data loss than RAID 5. The FlashDisk SX-2302S delivers a 1,150MBps sustained throughput and more than 78,000 disk I/O operations per second while maintaining mirrored cache for controller failover. The speedy ASIC hardware ensures successful disk rebuilds after a failure.

The 2U base unit comes with a single RAID controller and 12 high-capacity disks, and you can add four 2U expansion shelves—each with 12 drives—to expand

the FlashDisk SX-2302S to 60TB when using 1TB drives. You can fit up to 252TB of storage into a 42U rack, making the SX-2302S ideal for enterprises with high-capacity needs. The SX-2302S also features two SAS 4X wide host ports for multihost connectivity without the costs of implementing a Fibre Channel infrastructure.

The FlashDisk SX-2302S supports full-featured protection in RAID 0, 1, 3, 5, 6, 1+0, 15, 16, 30, 50, and 60. It comes with 512MB of cache memory, upgradeable to 2GB of cache memory per controller. The FlashDisk SX-2300 line also provides real-time remote monitoring, automatic drive failure detection, failed drive rebuild, hot-swap drive capability, and online expansion. The base unit's nonvolatile cache uses a Li-Ion battery that works for a minimum of 72 hours, and it features dual hot-swap, redundant 460/530-watt power supplies.

Winchester Systems FlashDisk SX-2302S

Starts at about \$16,000

A SAS hosted SATA disk array with RAID 6 that can expand to a storage capacity of 60TB with 1TB drives

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Improving Your SME's Risk Management Techniques

Some Basic Steps To Give Your Business A Fighting Chance Against Information Exploitation

by Kurt Marko

CALLING ALL IT MANAGERS. Do you know where your data is? Chances are, it just might be left in the back seat of a cab. In years of consulting with Wall Street clients, John Pironti, a board member of ITGI (IT Governance Institute) and chief strategist for Getronics (www.getronics.com), has learned that some of these security-obsessed financial giants lose as many as 10 BlackBerrys per day. A 2005 survey by CheckPoint Software (www.checkpoint.com) found more than 25,000 PDAs and laptops left in Chicago taxis over a six-month period. Many have unsecured, confidential data that, if in the wrong hands, could have significant adverse ramifications—a third of CheckPoint's respondents don't use passwords or any other security protection on their mobile devices.

This behavior belies the beliefs of many executives, however, as a recent study by

the ITGI found 80% of the CEOs and CIOs surveyed believe that IT risk management is important. Unfortunately, many of these same executives are largely paying lip service to the problem; only 30% have implemented measures to improve IT risk management within their organizations.

While the discipline of risk management and mitigation is broad and highly specialized, there are some basic steps companies can take to characterize and improve their risk profiles.

Key Elements Of A Risk Management Program

According to Pironti, "The best way to ensure a fighting chance of discovering and defeating information exploitation and theft is to take a disciplined, programmatic approach to discovering and mitigating threats and vulnerabilities." For companies just embarking on a risk management project, he recommends a simple, three-step program that incorporates an asset inventory,

threat and vulnerability analysis, and subsequent vulnerability management.

An asset inventory is a necessary prerequisite for any succeeding work because, he notes, "to protect information, it is essential first to know where it resides," both physically and logically within the IT infrastructure. Bryan Fish, founder and president of Securityworks (security-works.com), a company specializing in risk and security management tools, concurs, saying that the first thing companies need to understand is what information is most important to their businesses. He adds that finding where this information lives and what business processes touch it allows IT to "get a system-wide view of the risk ecosystem."

After identifying the most important information assets, the next step is to perform an actual risk or threat assessment. There are almost as many methodologies for doing a threat analysis as there are practitioners in the field, and their level of rigor and formality varies. Pironti has developed a relatively simple methodology using the timeless journalistic questions of "who, what, when, where, why, and how" as windows into the threat environment.

His technique starts by looking at the type of adversary (who), whether a script kiddie or motivated professional criminal, is likely to attack a company's infrastructure and goes on to focus on areas they are most likely to attack (what). Next, he examines likely time and place (when and where) of attack, adding, "The most popular day to launch an attack is Christmas" because the intruders know most people are on vacation, and IT departments probably have their defenses down.

The last stage of an assessment involves understanding the technical details of how various attacks are carried out (how) and what an adversary's motivation might be (why). This includes thinking about the likely security holes or schemes that might be used, such as whether the attack is focused on employees, using so-called social engineering techniques (commonly used in phishing schemes), the network infrastructure, or business applications.

Once a thorough threat assessment has been performed, the final element of a risk management program involves eliminating or mitigating vulnerabilities. Again, Pironti suggests a sequential, multifaceted approach: development of countermeasure plans, implementation of controls and processes, collection of metrics and measures, and the gathering of background intelligence to interpret the data and anticipate future threats.

Once companies have established some maturity in risk management and vulnerability analysis, an added level of sophistication entails using the collected data and reports to prioritize future IT security projects and spending. According to Caroline Ramsey Hamilton, president of RiskWatch (www.riskwatch.com), "a cost benefit analysis combines information from the vulnerability assessment along with relevant threat data and asset information. . . . The result of the cost benefit analysis will be to create a return on investment (ROI) ratio, balancing the value of the information against the cost of controls to protect it."

Experts agree that most businesses should conduct a thorough risk assessment annually, although Fish says that more stable environments may be able to get by with less frequent examinations. Even in those situations, he recommends IT perform less formal, ad hoc risk assessments whenever new applications are added to the environment. Pironti has a different perspective, advocating that risk management

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Risk Management Standards & Regulations

Process Standards & Best Practices

CERT OCTAVE (Operationally Critical Threat, Asset, and Vulnerability Evaluation)
www.cert.org

ISO/IEC 27007 Information technology - Security techniques - Code of practice for information security management
www.iso.org

National Institute of Standards & Technology Risk Management Guide for IT Systems
www.nist.gov

Key Features

Risk-based strategic assessment and planning technique for security; focuses on organizational risk and strategic, practice-related issues, balancing operational risk, security practices, and technology

Contains sections pertaining to all aspects of IT security, with the first devoted to outlining a risk assessment process

Provides a foundation for the development of an effective risk management program, containing both definitions and the practical guidance necessary for assessing and mitigating risks identified within IT systems

Laws & Regulations

Gramm-Leach-Bliley Act

HIPAA (Health Insurance Portability and Accountability Act)

The Sarbanes-Oxley Act

SECURITY

FEBRUARY 29, 2008

Protected Web Apps

nCircle's WebApp360 Stops Security Leaks

EVERY COMPANY KNOWS that protecting the information of its customers is vital. But putting that protection into place and making sure it works is no mean feat. But thanks to the nCircle Network Security WebApp360, an add-on for nCircle's appliance-based IP360 offering, users can rest assured that their enterprise Web applications and any supporting infrastructure components are being scanned like clockwork.

WebApp360 is a comprehensive risk assessment tool that hunts down weaknesses found in Web applications, supporting Web servers, OSes, services, protocols, the network infrastructure, and adjacent software systems. When any aspect of the system involved in supporting Web applications gets updated or upgraded, undergoes a code change, or experiences a failure, WebApp360 will let you know so you can take the steps necessary to prevent a breach.

Furthermore, as a software component of nCircle's appliance-based offerings, WebApp360 doesn't require any significant deployment or maintenance costs.

WebApp360's interface delivers a comprehensive view of the state of the network. On the Host Details screen, users can browse the Scan History and view the vulnerabilities in a column on the left side and the Web applications on the right. WebApp360 detects and blocks dozens of potential attacks, including Cross-Site Scripting, basic SQL injection, HTML tag insertion, URL insertion, invalid input, plain-text password submission, and password field AutoComplete attacks.

WebApp360's features include continuous real-time Web application assessments,

security risk analysis, a scalable architecture that supports up to an unlimited number of users, normalized risk scoring, extensive reporting capabilities via the IP360 appliance, and instant install on the IP360 appliance.

nCircle WebApp360

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Web application risk analysis module that detects vulnerabilities in Web apps

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Virtualization Gone Wild

Don't Let Virtualization Vaporize Your Physical Servers' Performance

by Christian Perry

THE VIRTUALIZATION HYPE TRAIN continues to blaze trails around the globe, with its conductor constantly proclaiming the virtues of the seemingly astonishing technology. But hidden in the caboose is a potentially ugly truth that could derail small and midsized enterprises that look to virtualization to solve many of their IT-related problems.

The ability to run operating systems and applications on virtual machines can create a conflict of resources in an IT environment. On one hand, the company is saving itself from purchasing additional servers, but on the other, the existing servers can easily become so taxed that the original purpose of saving money and other resources becomes overshadowed.

"Virtualization heightens the importance of every physical server and therefore necessitates much closer operating controls and scrutiny," says Yves Charles, general manager for Sysload Software (www.sysload.com). "New virtual machines can easily be created on the fly, and as the ease of bringing additional OSes and applications to a single physical machine has become almost second nature, it's often done without thinking of the consequences."

In fact, Charles says, with virtualization, individual physical machines can contain upwards of 10 to 20 applications, along with associated operating systems. This creates an environment of machines that pull far more operations-related weight than the average machine, and when one goes down, big problems are in store. With this in mind, SMEs taking advantage of virtualization's benefits must keep a keen

eye toward limiting its performance-related drawbacks.

Watch Them Closely

According to Dave Asprey, vice president of technology strategy at Zeus Technology (www.zeus.com), most IT professionals understand that virtualization must have some performance impact, but because vendors tend to under-exaggerate potential performance problems, confusion emerges as to where the truth actually lies. However, he says his company's experience in making traffic management virtual appliances has led to two understandings.

"First, the performance impact from virtualization is much smaller now than it was even three years ago, mostly because of improvements in VM [virtual machine] efficiency and new processor architectures," Asprey explains. "Second, the performance impact of virtualization on an individual server really depends on what virtual machine you're running, what software, how many instances, and how heavily loaded they are."

For most companies, the safe bet is to assume that virtual machines have the strong potential to overtax servers, and the good news is that those circumstances are relatively easy to remedy. Charles says that the most effective method for protecting virtualized servers is having an immediate and precise monitoring system in place.

"That way, you can be proactive and automate many things that need to be corrected before problems escalate. With precise detection of such incidents, an action can be launched when certain parameters are met, although human intervention is called for when more elaborate scenarios present themselves," Charles says.

Elect A Candidate

Many administrators struggle with performance problems caused by existing virtual machines, but they can avoid trouble by taking steps before putting virtualized servers online. Sysload's Charles says that this is the time to determine a proper server "candidate."

"Given its applications and usage, how much CPU, disk space, and I/O space is being consumed on average? Is there room for expansion? A server with low utilization is an obviously good candidate for virtualization. It also depends on spikes in workload activity," he says.

By performing thorough analysis before getting in deep with a virtualization project, Charles says companies can avoid encountering "micro-phenomena" that will aggravate the entire physical machine. Further, he warns against the common practice of using CPU utilization numbers to join machines with similar peak periods of operations on the same physical machine.

Problem? What Problem?

Ask Steve Davidek about the downside to virtualization's impact on individual servers, and he'll tell you he doesn't see any. But there's a method to the madness of Davidek, director of advocacy, chapters, and SIGs for Encompass (www.encompass.org). He says that with VMware's built-in high availability and disaster recovery modules, along with the use of VMotion, the technology automatically moves an ESX server that's using too much memory or CPU cycles to another ESX server. It also helps to boost the equipment's horsepower.

"We took three existing HP Proliant Intel-based servers and added extra memory, extra NICs, and extra Fibre Channel connections to the SAN," Davidek says. "Make sure your IP network is also as fast as possible. The ESX servers should be connected to at least gigabyte network connections—each of my servers has four 1GB network connections."

Once the infrastructure can logically support virtualization, it comes back to effective monitoring, and as companies grow more comfortable with their virtual machines, they can become more involved with granular server data metrics to ensure peak performance.

Best Practices

While monitoring is wise for any virtualized environment, SMEs that have an ever-increasing stake in the technology should look for additional methods to keep virtual machines from overloading their physical servers. Eric Greenfeder, director of product management for Primitive Logic (www.primitivelogic.com), recommends a five-step best practice plan.

1. Profile candidate applications by monitoring their system resource utilization over time (CPU, disk, memory, and network). Use this information to create a virtualization capacity plan.

2. Create a server virtualization hosting plan that groups applications that will not overly compete for system resources.

3. Create system resource "boundaries" for your virtual machines to ensure that a single VM (virtual machine) will not consume all resources on the host's hardware. Most virtualization platforms allow you to configure these settings for each VM.

4. Utilize network storage solutions for shared data and VM virtual disks. This approach will aid in VM load balancing and disaster recovery scenarios.

5. Leverage VM clustering and live migration features in the virtualization platform to increase performance and scalability.

"These best practices, along with a sound infrastructure management process framework, such as ITIL V3, will keep applications performing in accordance with SLAs [service-level agreements] in a virtualized environment," says Primitive Logic Chairman and CEO Bob Hamer.

"Capture and correlate as many metrics as possible on every candidate server," Charles says. "Putting an agent with a light footprint on each virtualized server, which then captures a snapshot of a server's performance every second—as opposed to every minute or more—will reveal trends and patterns in processing speeds that can raise red flags well before non-agent-based monitoring systems." □

Improving Your SME's Risk Management Techniques

Continued from Page 25

and vulnerability assessment be incorporated into the daily processes of IT security professionals. He advises companies to maintain awareness of emerging threats, through simple activities such as checking CERT (www.cert.org) to "see if there's anything going on."

Standards, Regulations & Automation Tools

IT organizations interested in pursuing a more rigorous risk management approach will find no shortage of industry standards and best practices. Yet going through reams of documentation can make filling out a 1040

seem easy. Fortunately, there are a number of software automation tools available to assist those needing to meet the specific requirements of these standards and regulations.

The complexity, ubiquity, and dynamism of today's networked and mobile IT environment means businesses must put greater emphasis than ever on understanding and

managing risk. While implementing formal processes are important, Pironti cautions companies against thinking formalism and technology offer magic bullets. He concludes that you need to ingrain risk management into a company's ethos: "It's really a cultural thing, not a technological thing." □

STORAGE

FEBRUARY 29, 2008

Archive The Easy Way

QStar's Latest StryStr Appliance Lends A Hand

FINDING STORAGE data management tools that conform to your SME's specific needs can be costly and frustrating. But QStar Technologies' second-generation StryStr Archive Appliance is capable of handling a variety of applications to address almost any organization's data retention and archiving requirements.

The StryStr features support for QStar's StryPACS and StryML apps, which let SMEs engage in medical image archiving

and email archiving. QStar's platform is built around the Linux kernel and employs embedded data management software to manage connections to CAS devices, tape media, and optical sources.

The StryStr lets users build around the unit's open architecture with support for SATA hard drives and the removable media. QStar offers two variants: the 1U rack-mountable QSS 2000 with 500GB, 750GB, or 1TB of mirrored data protection



and the 2U rack-mountable QSS 6000 with up to 6TB of RAID-5 data protection. Users can also upgrade the QSS 2000 with up to three more storage expansion units that each support 15 hot-swappable drives. The QSS 6000 supports up to six more storage expansion units for up to 96TB of archive data.

Either model can be configured with one or two dual-core Intel Xeon processors and up to 4GB DDR RAM. Other features in-

clude an integrated ATI ES1000 controller with 16MB of dedicated SDRAM, a CD-RW/DVD drive, a dual-port auto-sensing gigabit NIC, automatic IP address assignment, iSCSI support, and a Fibre card.

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TECHNOLOGIES

Online Communities Go Corporate

What Can Virtual Worlds Do For Your SME?

by Sixto Ortiz Jr.

WHEN MOST PEOPLE think of virtual worlds, they usually think of caffeine-fueled Internet addicts spending countless hours in front of their computer monitors, interacting with other equally sleep-deprived online friends. Witness the rising popularity of massive online multiplayer games and environments, such as EverQuest, Second Life, World of Warcraft, and others.

But, virtual worlds are going corporate as many enterprises realize they can leverage them to take their businesses in new directions.

What Is A Virtual World?

In an essay titled "Second Life: Virtual Worlds and the Enterprise," independent consultant Susan Kish defines three types of online virtual worlds: MMORPG (massive multiplayer online role-playing games), metaverses, and MMOEs (massively multi-learner online learning environments). In Kish's view, MMORPGs are more focused on gaming and include titles such as EverQuest and World of Warcraft. Metaverses, on the other hand, are more socially driven; the most recognized example of a metaverse is Linden Lab's Second Life.

Most CEOs don't relish the thought of rank-and-file employees whiling away their working hours wandering around virtual landscapes. But, the fact is the use of virtual worlds can deliver value to a business.

Some businesses have already dipped the proverbial toe into the virtual world waters. For example, IBM (www.ibm.com) has been investing considerable time and money in virtual worlds by establishing a presence

within Second Life; as recently as last month, the company launched a new island within Second Life called IBM Virtual Healthcare Island, which allows visitors to explore IBM's ideas for fixing the current healthcare system.

Peter Haik, CEO and co-founder of Metaversatility (www.metaversatility.com), a San Antonio-based virtual world development company, points to Qwaq (www.qwaq.com), a virtual world platform for online collaboration. According to Haik, Qwaq seamlessly integrates with many office programs, allowing users to drag and drop files into the environment and work on them with other collaborators. The product allows users to select prebuilt working spaces into which content can be dragged

3D models of products or concepts, says Karl Kapp, a consultant and scholar specializing on the convergence of learning, technology, and business operations. In terms of training, he says, a company can re-create a factory, refinery, or any other situation where the avatars learn how to conduct a safety drill, how to operate equipment, or even how to react to an emergency, all in the safety of a virtual world.

So, a group of architects could conceivably wander around a virtual representation of a building they are designing, or molecular biologists could manipulate and study a virtual 3D representation of a new pharmaceutical compound.

Other advantages virtual worlds can deliver to enterprises, adds Driver, include

A group of architects could conceivably wander around a virtual representation of a building they are designing, or molecular biologists could manipulate and study a virtual 3D representation of a new pharmaceutical compound.

and dropped; co-workers invited to join are then able to collaboratively work on the content dragged into the Qwaq Forum.

Real Advantages To Online Interaction

Erica Driver, principal analyst at Forrester Research, says virtual worlds can help organizations replicate, with some accuracy, the experience of working physically alongside others, including working with and sharing digital 3D models of physical or theoretical objects.

Virtual worlds allow small or midsized enterprises to create elaborate simulations or

the incorporation of nonverbal communication into interactions where they are important and the ability to make remote training and counseling more realistic options for organizations.

Metaversatility's Haik echoes this sentiment: He says virtual worlds increase collaboration at reduced costs by enabling enterprises to hold meetings and events in a virtual setting that would otherwise require extensive amounts of travel, resulting in savings of both time and money.

So, what are some common uses of virtual worlds today? According to Forrester's

Driver, these include collaboration among distributed workers, training and simulation, and conferences and events. Also, adds Haik, virtual worlds enable enterprises to connect to their global audiences and provide an opportunity for an organization to connect to users around the globe.

An interesting example of a virtual world application, says Kapp, was done by a manufacturer of turbines used in power-generation plants. This company, he adds, simulated a crisis situation in a virtual world (a turbine that exploded at a customer's plant). In the virtual world simulation, adds Kapp, employees interacted with the upset client and even examined a virtual model of the exploded turbine. At the end of the simulation, the employee briefed the client on the results of the incident investigation.

Alan Dunton, a spokesperson for The Multiverse Network (www.multiverse.net), a developer of a new technology platform for virtual world development, says a Multiverse customer has built a demo world to perform HR and new employee orientation tasks.

Concerns For The Enterprise

But, is the prospect of saving money and time by enabling virtual meetings amongst real-world parties enough motivation for enterprises to adopt virtual worlds at a brisk pace? One of the criticisms that might be leveled at virtual worlds is the fact that conducting virtual meetings detracts from the face-to-face interactions that are such a valuable element of "real-world" meetings. After all, can team building truly be as effective when done with avatars?

In spite of a lot of talk and interest around Second Life as far as virtual worlds are concerned, Metaversatility's Haik says "... we find much more enterprise efficiency using other worlds, such as Qwaq and Multiverse." These worlds, he adds, run on company servers behind company firewalls, providing a major benefit that is not available to enterprises in Second Life.

So, enterprises considering experimenting with virtual worlds should consider their options carefully before proceeding. Haik recommends that enterprises looking to collaborate in virtual worlds determine the right platform and approach for making enterprise collaboration work virtually.

A Virtual Future?

The drivers for using virtual worlds in the enterprise are compelling: After all, says Kapp, humans are used to working, socializing, and living in an actual 3D world. Virtual worlds, he adds, allow people to work, learn, and interact in the same space. Also, these worlds eliminate distance and provide a richer environment than 2D collaboration tools. As virtual worlds become a mainstay of the online experience and the lines between the real and virtual worlds begin to blur, enterprises will most likely have to follow users down that path and determine how best to set up shop and flourish virtually. P

Some Common Virtual Worlds

World	Company	URL	Comments
Multiverse	The Multiverse Network	www.multiverse.net	A virtual world development platform designed for developers to create new types of worlds easier than before
Qwaq	Qwaq	www.qwaq.com	Virtual spaces designed for enterprise use that allow users to collaborate on common content, such as spreadsheets and documents
Second Life	Linden Lab	www.secondlife.com	A virtual world primarily designed for providing social interactions among its residents

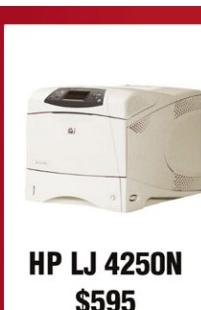
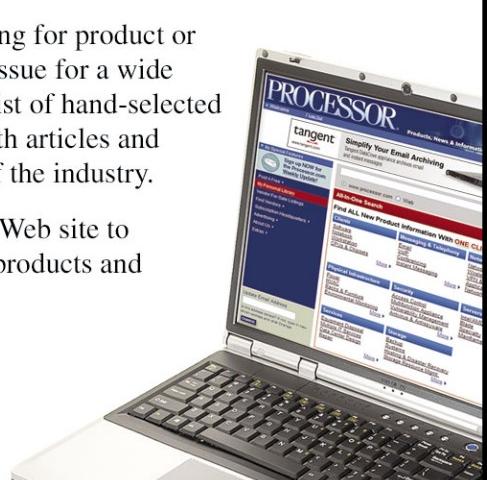
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SIX QUICK TIPS

Disposing Of Your Used Equipment

Explore Alternatives To Hauling It To The Dump

by Robyn Weisman

• • •

BACK IN THE 20TH CENTURY, most companies didn't bother to consider what to do with broken or out-of-date hardware. They threw it into a dumpster, maybe with a tiny pang of guilt for causing the need for additional landfills. Used IT equipment brings up further consideration. Much of the material in old equipment, such as the amounts of mercury found in older monitors, is toxic. Meanwhile, much of the material can be reused.

How do you go about updating the ways your small to midsized enterprise disposes of used equipment without impacting the environment unnecessarily or compromising confidential information still stored on it?

Establish Business Rules For Reuse & Recycling—& Emphasize Reuse

Bob Houghton, president of technology change management provider Redemtech (www.redemtech.com), says that the best approach in dealing with used equipment is to institute best practices that can automate your decision-making process in determining whether hardware ought to be refurbished and reused, resold, harvested for parts, or recycled.

"By extending equipment life cycles and remarketing in a way that enables reuse

where appropriate, many organizations can improve return on investment in IT, reduce the amount of equipment being stockpiled, and minimize environmental impact," Houghton says. "This can be based upon value-appropriate thresholds, known market demand, and business needs within the organization."

Consider Outsourcing Your Reuse & Recycling Processes

"The management of a data and storage media destruction process can be challenging and is always expensive," says Leigh Lanzet, director of business development at electronic media destruction services provider Morgen Industries (www.morgenindustries.com). Lanzet recommends that you consider outsourcing your entire retirement and disposal processes to a specialist service provider.

"Doing this can significantly reduce both costs and risks, and it provides companies a means of transferring some of the associated liabilities to the vendor," Lanzet says. Make sure, however, that you evaluate a potential vendor's years of operation, financial strength, insurance coverage, security measures, asset tracking, and other technical capabilities, notes Lanzet.

Ask Certain Questions When Looking For The Best Asset Management Outsourcer

"For most companies, the typical computer has a life span of three to five years. That

means that every three to five years, they are installing new computers for each of their however many employees, along with servers and new networking equipment," says Cliffie McKay, director of operations at DMD Systems Recovery (877/777-0651; www.dmdsystems.com).

You need to do your homework to find the best IT asset management company for your needs. McKay says that your homework should include answering these questions:

- Does the outsourcer emphasize reuse over recycling (similar to what Houghton recommends in his business rules)?
- In what ways does it go about getting equipment reused?
- What does it do with used equipment after it is recycled?
- What data destruction services does it offer?
- Does it adhere to strict guidelines regarding safe equipment disposal? What are those guidelines?

Make Sure The Company Practices Responsible Recycling

Responsible recycling policies are particularly important because the Environmental Protection Agency has really cracked down on irresponsible disposal of e-waste. "There are many other companies that will purchase different parts of computers and make sure that circuit boards, plastics, metals, and glass all get recycled in forms that are appropriate for our environment," McKay says.

Exceeding proper guidelines and providing precise documentation makes up a huge part of responsible recycling. According to Redemtech's Houghton, federal-level environmental policy on e-waste is not only getting increasingly strict, it is retroactive in nature, so even if you or your chosen outsourcer may be adhering to 2008 guidelines, you might discover that because you were not adhering to 2013 guidelines back in 2008, you could be liable for damages.

As part of this adherence to present and future regulations, McKay adds your potential vendor must show it can provide strict documentation about any used assets your SME has sent to it. McKay notes, "Asset management vendors should be able to offer proof of indemnification, proof of EPA compliance, [a] certificate of destruction, asset tracking lists, and transfer of ownership." □

Best ROI: Resell At Least A Portion Of Your Used Equipment

Before you begin figuring out how you're going to dispose of your old hardware, consider the possibility that it has some resale value, says Corey Donovan, vice president of IT hardware remarketer Vibrant Technologies (www.vibrant.com). "I recently spoke with a metals scrapper who realized he had been throwing away about \$10,000 worth of used Cisco equipment every month until he started offering it to remarketers," Donovan recalls. "Sometimes systems or parts that are even five years old retain their value due to demand from government institutions or scarcity on the market. It's always worth finding out if you can get paid for the hardware rather than paying somebody to haul it away."

Best Tip:

See If A Local College Can Reuse Your Surplus Hardware

Donovan says donation is an alternative to the junking of your equipment. "There are a lot of great organizations out there which will put your retired equipment to good use, perhaps in an educational capacity," he says.

Bob Hershberger, associate professor of modern languages and Tenzer University professor in instructional technology at Greencastle, Ind.-based DePauw University, says that according to estimates, anywhere from 50 to 80% of all computers in higher education are in storage. Facing steep costs for disposal themselves, most institutions opt for prolonged storage of these electronics, he says.

However, DePauw University, along with several others, has been designated as an official Microsoft refurbisher and is able to supply newly licensed, recycled computers to individuals and communities in need at a fraction of the cost. DePauw's program, known as the Community Technology Enhancement Program, has both saved the university money and provided computers to people in the state of Indiana who otherwise could not afford them.

Hershberger urges SMEs to contact their local colleges and universities to see if they offer similar programs. "Even if they don't, they will, at the very least, be able to provide some insights as to the best way to dispose of unwanted electronics," he says.

BONUS TIPS

■ Separate the procedure for disposing of used equipment from electronic media destruction. The value of your data far exceeds the value of your hardware, so don't make the mistake of letting your hard drives, no matter how many times you've zeroed out your data, go with your retired computers or servers, says Leigh Lanzet, director of business development at Morgen Industries (www.morgenindustries.com).

"You should pull your hard drives from every PC and server before decommissioning or disposition," says Lanzet. "It will cost significantly less to replace a hard drive than suffer the consequences of a data breach."

■ Don't assume a certificate of destruction gets you off the hook. Bob Houghton, president of Redemtech (www.redemtech.com), says a certificate of destruction does not necessarily guarantee that

your equipment hasn't been incinerated or dumped in an uncovered landfill in China, given that nearly 80% of today's U.S. e-waste is exported overseas. "To be truly responsible, you need to be better informed that your vendor's processes adhere to strict zero-export, zero-landfill, zero-incineration recycling policies," says Houghton. "This provides peace of mind to customers that their equipment is being disposed of in a proper manner."

designed to rapidly and accurately rebuild RAID protection with its parallel, virtualized design. Instead of rebuilding the entire drive, Rapid RAID Rebuild finds and restores only the lost data across a broad, distributed set of drives. The restored data is distributed across the drive array, which allows the system to function at a high level while returning to a fully protected state.

3PAR's server also features internal drive tiering, which allows administrators to configure drive capacity of both Fibre Channel and Nearline storage tiers. With 3PAR's Dynamic Optimization, administrators can also configure data service levels as needed across both storage tiers with a single command.

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FIBRE CHANNEL DRIVES are used for demanding online applications and are also quite expensive. Less-demanding nearline apps are relegated to cheaper enterprise-class SATA drives. 3PAR's Nearline for Online tiered storage platform enables administrators to use SATA drives for the more intensive online applications, saving company costs.

The technology that makes this possible includes 3PAR's purpose-built virtu-

alized storage platform, InServ Storage Server, which widely stripes data across all its enterprise-class SATA drives. The tiered storage array is built on a virtualized platform that supports a variety of tiers, including 146GB Fibre Channel, 400GB Fibre Channel, and 750GB enterprise-class SATA drives.

Another feature of the InServ Storage Server is Rapid RAID Rebuild. In the event of a drive failure, the server is



WHAT'S HAPPENING

dtSearch Performs Incredible Feats

Search Terabytes Of Text In Less Than A Second

by Julie Sartain

• • •

IMAGINE A TEXT RETRIEVAL PRODUCT that can search through terabytes of data in less than a single second in most cases. Now imagine that you can perform that same function in Chinese, Arabic, and hundreds of other international languages that fall under the Unicode standard. According to multiple experts (based on font size and type, page size, margins, spacing, and software used), a terabyte of data is approximately 500 million typewritten pages, all of which can be searched and indexed to produce specific matched criteria in less than a second.

Product Capabilities

dtSearch (301/263-0731; www.dtsearch.com) has a unique system to accomplish these tasks. Development began on dtSearch in 1988, and after years of fine-tuning, the company released the first application in early 1991. Now, dtSearch can instantly search terabytes of text in many dozens of formats, including an ever-expanding list of Microsoft file types and non-Microsoft file formats, as well as data that's available through HTTP/HTTPS connections, public Web sites, popular Web-ready file types, and dynamically generated Web data.

"In addition to expanding the types of data that the dtSearch product line supports," says David Thede, president of dtSearch, "we have also expanded the list of programming languages that our developer component supports. Originally, we supported only C/C++. Then we added Java, COM, and .NET. More recently, for example, we have expanded the

.NET Spider API to include not only current versions of .NET but also sample code covering 32-bit and 64-bit .NET."

History & Evolution

According to Thede, the original idea behind dtSearch was to write a better text-retrieval application. The goal was to instantly search a large volume of files quickly and with 100% accuracy. After executing a search, the goal was to intelligently sort matching documents and then to highlight hits in retrieved files. In early 1991, the first dtSearch application was released.

While the ultimate goal of writing a better text retrieval application has remained, notes Thede, the company has seen some fairly radical transformations in implementing that original goal. One transformation was related to the typical size of data that customers needed to search. "Originally," says Thede, "our slogan was 'instantly search megabytes of text.' Then, it evolved to 'instantly search gigabytes of text.' And now, today, the slogan is 'instantly search terabytes of text.'"

But it isn't just the slogan that changed, notes Thede. The index capacity is greater now by orders of magnitude compared to what it was in 1991. Very few people could even conceive of what a terabyte of data was back then. Now, a single index can hold more than a terabyte of data, with indexed search time still typically less than a second.

Partners & Changes

Another major change was adding a developer component to the dtSearch product line, adds Thede. In the first few years after its initial release, the dtSearch product line was an end-user application only. Then, in 1994, Symantec (www.symantec.com) approached dtSearch about including its

search technology into one of the first applications for 32-bit Windows.

"To accommodate Symantec," says Thede, "we turned the dtSearch end-user application into a dynamic link library (DLL), which Symantec could programmatically integrate with its own code." Symantec embedded the DLL in Norton Navigator, explains Thede, which was released alongside Microsoft's (www.microsoft.com) initial release of a 32-bit Windows operating system, "They sold millions of copies of Norton Navigator with the embedded dtSearch technology."

According to Thede, after the Norton Navigator release, the company began mar-



keting the DLL as the dtSearch Engine component for programmers to embed in their own applications. While dtSearch has continued to manufacture enterprise-ready solutions for Windows, it is in the development component arena that the dtSearch product line has seen the largest growth.

Many Phases, Many Options

The dtSearch Text Retrieval Engine now comes in several different versions for programmers, including Engine for Linux and Engine for Win & .NET. The company added an easy-to-use, no programming required, developer application for Microsoft IIS (Internet Information Services) Web servers and a similar developer application for publishing data to CD, DVDs, and other portable media. "And," he says, "We added a built-in Spider that has also turned into a development component."

The original dtSearch line was English only, notes Thede. But as the international market grew, full Unicode support was added, including hundreds of international languages. Input from customers with advanced Asian and Arabic text analysis needs inspired dtSearch to add API support for third-party morphological analyzers.

Combining its text retrieval with advanced morphological analysis enabled better

handling of issues such as Asian and Arabic morphology and entity extraction, continues Thede. "We worked with a leading vendor of language analyzer technologies and also with some of the smaller vendors to ensure that the resulting API would work efficiently with their products."

The initial implementation of the API was functional, but post-release feedback from linguistic technology vendors, as well as customers, made dtSearch realize that it should change the API to allow the analyzers access to greater volumes of input data. Giving the language analyzers larger, consistently sized blocks of text to work with was an important step for optimizing certain advanced linguistic processes. This, subsequently, resulted in a release that incorporated this new generation of language integration technology.

What's Different From The Competition?

In addition to its ability to quickly search a large amount of text, dtSearch offers built-in proprietary file format support and converters, eliminating the need for third-party supports. "We built our own proprietary file format and display technology," says Thede. "Relying on our own file format support enables us to greatly simplify licensing for our developer customers and allows us to optimize the file parsing process for efficient indexing, searching, and hit-highlighting."

The built-in Spider is another significant distinction. According to Thede, the dtSearch product line offers extensive and highly flexible distributed or federated search options. All products are equipped with integrated relevancy-ranking and hit-highlighted file displays. The product line also has a flexible developer API for integrating dtSearch text search and file format support capabilities into other applications.

"And last," says Thede, "Our company is known for speedy adoption of new programming standards, new operating systems, and new file types. Plus, we have a flexible licensing model that doesn't involve per document and other arbitrary limits that enterprises and developers find maddening. For example, we sell a lot of royalty-free OEM licenses, which make the product line an easy choice." □

THREE QUESTIONS

Manage Your Power

Cyber Switching Offers PDU Equipment At SME-Friendly Price Points

by Will Kelly

POWER DISTRIBUTION AND MANAGEMENT is a challenge to many small to medium-sized enterprises because of tight budgets and other limited resources that sometimes force them into making some potentially costly sacrifices when it comes to power distribution and management.

Cyber Switching (408/436-9830; www.cyberswitching.com), based in San Jose, Calif., is a leading designer and manufacturer of power management devices providing solutions for remote access, rebooting, and power cycling of any network-attached device. Many of the company's power solutions are available for SME-friendly budgets.

We spoke to Jasmine Moore, spokesperson for Cyber Switching, who gave us some insight

into what Cyber Switching has to offer small to medium-sized enterprises.

■ What are the biggest IT-related issues facing today's small to midsized enterprise?

Moore: The biggest IT-related issues facing today's small to midsized enterprise are budget, uptime, and space. Often, small to midsized enterprises do not have the large budget or space allotments as larger enterprises. Thus, IT managers find themselves having to choose the most economical equipment with the most features in order to meet their requirements. However, intrinsic of this decision is uptime, as dependability of the chosen products can mean the difference between a functional data center or test lab or one that is down due to network problems or electrical fault.

■ What should Processor readers know about your company's products?

Moore: Cyber Switching's products aim to address and meet these issues facing today's IT managers. Our product breadth is such that our clients can choose the product which best fits their budgetary, space, and specification requirements with ease and accuracy.

Our PS PDU line allows for nonintelligent, non-metered power distribution capabilities, while our E Series provides a metered readout of amperage draw for the entire PDU. Our intelligent PDU, the Dualcom series, provides today's IT and infrastructure managers with remote monitoring and control features essential to all size enterprises.

Cyber Switching was a pioneer in developing the individual outlet current monitoring and management provided by the Dualcom line. This gives the end user the granular data that is required and makes his or her job much easier to perform. Our units provide information, remotely and with easy accessibility.

Additionally, our new Enterprise Management Console software, the EMC, allows for a central interface in which to control our

intelligent PDUs. In addition, we offer our Galaxy series, which distributes single-phase power within a three-phase infrastructure easily and affordably.

■ What makes your company unique?

Moore: We were the first company to introduce individual outlet monitoring and metering, which has become an essential feature in today's growing data center and test lab enterprises.

In addition, our excellent customer service and open communication with our clients allows us to ensure our products are developed to meet the ever-changing needs of today's enterprises.

Our excellent customer service allows for us to incorporate client feedback, which is essential to our product development, and ensures that we are a customer-facing, market-driven company.

Another unique point about Cyber Switching is that the company's CEO, Chuck Reynolds, is an electrical contractor with more than 30 years of experience providing customers strong expertise in the electrical space. The company also offers a consultative and solutions selling approach that means experienced Cyber Switching staff work with prospective and existing customers throughout the entire sales cycle.

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VIRTUALIZED SERVER environments need increasingly centralized storage to maintain network efficiency and reduce costs. HP is offering a new option featuring low-cost data security: the StorageWorks MSA2000 (Modular Smart Array). This collection of enterprise-class disk arrays is economical yet optimal for expanding disk functionality.

Entry-level SANs are moving toward enhanced availability, so storage capabilities must expand. The MSA2000 arrays are powerful, with



four times the bandwidth of previous MSA generations. The StorageWorks family offers the MSA2000i (1Gb iSCSI) and the MSA2000fc (4Gb Fibre Channel); both can run on single or dual controller models. Each array is capable of scaling up to 36TB of storage.

Although the MSA2000 is constructed for use within SMEs, companies can use the storage system for secondary locations and remote backup. Users can deploy the MSA2000 on multiple applications along with SAS or SATA drives.

With the MSA2000, application processes occur faster to guarantee system accessibility. Business communication downtime is reduced thanks to updated redundancy tools. The MSA2000 provides Snapshot and Clone software to protect enterprise data and prevent business downtime through rapid recovery services.

The MSA2000 complements HP BladeSystem customers' existing environment. Users can execute compound blade configurations vs. a single blade at a time. IT can supplement file services for the MSA2000 with ProLiant Storage Servers or StorageWorks EFS Clustered Gateway.

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Webroot's E-Mail Security SaaS Helps Keep SMEs Safe

EMAIL IS A PRIMARY MEANS of communication in the workplace. It can also be a source of viruses and massive amounts of spam. It takes time and effort to manage unwanted email and can occupy valuable personnel. Webroot's E-Mail Security SaaS (software as a service) provides the means to manage and secure email without the need for additional hardware, software, or manpower.

Benefits of E-mail Security SaaS include low cost, easy implementation, and real-time, on-demand reporting. The service protects against all known viruses and 98% of spam. Support is

available 24x7x365 with a 99.999% uptime guarantee.

Features of the service include antivirus and antispam protection, which is facilitated by five best-of-breed engines that detect viruses quickly. Zero Hour filters to prevent exposure while identifying threats and seven different levels of spam protection combine to catch 98% of spam.

With Managed Encryption Service using Transport Layer Security, the service encrypts email at even the desk-to-desk and peer-to-peer levels. Inbound and outbound rules can be set to

manage content and event-based email, and rules can be customized for specific occurrences or general traffic flow. The image protection features built into the service specifically target offensive or distasteful images that could find their way to an employee's inbox. Every image is scanned, and if the resulting data matches that of any known salacious images, the email will be logged and either deleted or quarantined.

For the sake of continuity, up to 28 days of inbound and outbound emails will be retrievable from secure, mirrored data. This data can be accessed via Webmail, which allows users to access and send the data from any browser, whether in or out of the office. With the Webroot E-mail Security SaaS, all email is archived in data centers in different geographical locations for recovery in the event of a disaster.

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Multiplication For The Masses

Imation's New Disc Duplicators Enable Quick & Easy Duplication

OFFICES THAT NEED to duplicate large quantities of CDs and DVDs quickly and easily should consider Imation's new CD Duplicator and CD/DVD Duplicator. A touch of a button is all it takes to create copies of data using these duplicators.

The standalone duplicators are small and portable and do not require software, cables, or a PC. Because of their ease of use and portability, both duplicators can be transferred to meetings and offsite locations. This gives users the flexibility they need to create copies of important data on

demand, regardless of whether a computer is nearby or if they're away from the office.

Inside the Imation CD Duplicator, you'll find a 52X CD-RW drive; the CD/DVD Duplicator features a 16X DVD+/-R/RW drive. Both are compatible with 12cm or 8cm discs.

Because the duplicators require no cool-down between duplications, you'll benefit from continuous copying without wait or lag time. A

user-friendly menu on the front of the devices provides access to various features and functions.

The CD Duplicator can copy a master 700MB CD to CD-R media at up to 52X speeds in about two and a half minutes and can also duplicate CDs to CD-RW media at up to 32X speeds. Using up to 16X speeds, the CD/DVD Duplicator duplicates a single mas-

ter 4.7GB DVD in about 11 minutes. This duplicator can also duplicate discs to CD-R/RW, DVD+/-RW, and DVD+/-R DL media. Both include a five-pack of Imation brand media.



Imation CD Duplicator & Imation CD/DVD Duplicator

CD Duplicator \$279.99; CD/DVD Duplicator \$329.99

Duplicate CDs and DVDs quickly and easily without the need for a computer, software, or cables

(888) 466-3456

www.imation.com



Power Distribution Closer To The Load

Liebert FDC Can Be Positioned Within A Row Of Racks

THE LIEBERT FDC from Emerson Network Power provides the flexible power distribution your data center needs in a standalone cabinet that fits within a standard rack footprint. You can place the cabinet by itself or among other rack enclosures in virtually any location within a row of racks. This so-called "in-rack" location

means your power distribution is closer to the load and reduces the need for vast amounts of under-floor cabling.

The newest 480V version of the Liebert FDC brings higher voltages right to the rack, letting you take advantage of new



high-density servers that can handle 480V. And because UPS output can be sent directly to the servers without being converted to 208V or 120V, you eliminate lost energy.

With 84 poles (two panelboards), the Liebert FDC helps ensure you won't run out of circuit breaker poles before reaching rated capacity. You can access panelboards individually through hinged access covers, performing any service without exposing the other panelboards.

The standard FDC offers front and rear access and a bottom cable exit; a top cable exit is optional. Local and remote power monitoring capabilities are available, including an Enhanced Monitor with

Modbus RTU, Liebert Distribution Monitoring for main and branch circuits, and a current monitoring panel. It also features EZ-view doors and bolt-in or plug-in Square D or GE panelboards.

Emerson Network Power Liebert FDC

Starts at \$9,000

A flexible power distribution product that fits within a standard rack footprint and can deliver up to 480V of power

(800) 543-2378

www.liebert.com



Reliable File Encryption

Safely Manage Enterprise Documents With Voltage SecureFile

FUNCTIONING AS A MULTI-LOCATION backup manager, Voltage SecureFile uses encryption to protect sensitive documents wherever they're transported. This flexible tool can be used to safeguard personal information for your desktop, yet is applicable in broader networks. Optimum security measures are ensured when SecureFile Command Line executes scheduled safety procedures for imported files.

SecureFile features include:

Variable file encryption. SecureFile offers full encryption for any user, at any time, and in any

place. This process can be appropriated to desktop files, batch files, or files located on collaboration portals. Protection doesn't end within the portals; SecureFile guards files after exiting the portal. Secure File's deployment is powered by Voltage IdentityBase Encryption.

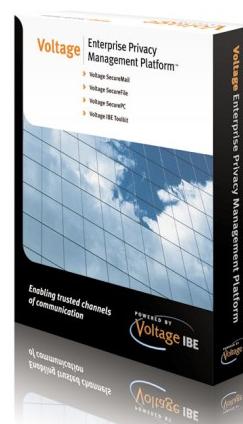
Security service management.

Security turns to service with VSN (Voltage Security Network). VSN is ideal for SMEs inter-

ested in full-service encryption management and offers decryption and encryption resources.

Desktop defense. Users are able to secure desktop files and guard them at any location. Utilizing Microsoft Information Rights Management, users can create access controls that live with the file's content rather than location.

Overall enterprise security. SecureFile has the capability to protect against data breaches and secure administrative documents for external file sharing. Additionally, automated key management



supports group file sharing by instituting compliance policies.

Voltage Security SecureFile

Starts at \$50 per user

Protects your data by encrypting any file format wherever it goes and however it's transported

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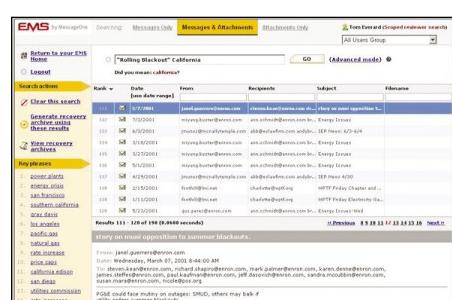
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Get Compliant

Archive Your SME's Email With MessageOne's EMS Rapid Archive

TODAY'S LEGAL ENVIRONMENT mandates procedures for businesses in regard to email retention. Companies large and small not only have to maintain archives of all email passing through their systems, but they also have to be able to quickly produce particular messages during the discovery phase of litigation. Complicating matters is the need to stay abreast of revisions to state rules and Federal Rules of Civil Procedure, or FRCP.



MessageOne's new EMS Rapid Archive can help. This cost-effective, rapid-ROI SaaS (software as a service) not only stores your organization's email messaging in a secure location, but it also makes it searchable in real time. When email passes through your company's system, a compressed and encrypted copy is

MessageOne's EMS Rapid Archive securely backs up your company's email online and makes it searchable.

automatically transmitted to the EMS data center. Furthermore, using EMS Rapid Archive, your company can place legal holds on key messages. This can prevent the destruction of key email evidence that may be needed for pending litigation.

IT personnel can centrally manage the service with fine control over message retention, as well as deletion at the appropriate time. This maintenance-free SaaS can be deployed in single day, according to MessageOne.

EMS Rapid Archive is based on the company's Managed Service Platform. It can integrate with Active Directory and coordinate with Microsoft Exchange to keep user information, distribution lists, and topology data synchronized. There's even an option to allow direct user access through Outlook.

MessageOne EMS Rapid Archive

\$1 per user per month for 500 users

Email archiving SaaS helps you comply with federal and state rules regarding discovery and litigation holds

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Enhanced Mobile Security

Mobile Guardian Protects Data With Improved Encryption



CREDANT Mobile Guardian Enterprise Edition 6.0 provides detailed information about groups, users, devices, encryption, and more.

IT'S NOT ENOUGH to protect data on servers and desktop clients. Today's threats require that companies take measures to also protect data stored on or transferred to mobile devices. CREDANT Technologies' latest release of CREDANT Mobile Guardian, aka CMG, Enterprise Edition can provide just this type of protection.

CMG Enterprise Edition 6.0's features include Full Data Encryption2, a form of disk encryption that was developed specifically to protect Windows and Vista platforms. Full Data Encryption2 provides policy-based options to protect a variety of endpoints. This encryption method offers more complete protection than other technologies. Full Data Encryption2 is based on the Intelligent Encryption engine and is FIPS 140-2 validated.

CMG Enterprise Edition also includes CMG Enterprise Edition Shield for Windows, which provides protection for data

on notebooks and desktops. External Media Shield protects data that is transferred from a notebook or desktop to external media.

Vista Shield offers more security benefits. This tool can replace Bitlocker, or it can work together with Bitlocker to protect a company from internal threats.

Mobile devices can contain sensitive data that is

vulnerable to attack or theft, and the devices themselves can also be vulnerable to theft. By providing Full Data Encryption2, CREDANT Technologies helps companies ensure that data stored on mobile endpoint devices is protected. The software provides tools for managing this encryption, as well as advanced auditing and reporting tools for proving that proactive steps were taken to secure the data.

CREDANT Mobile Guardian Enterprise Edition 6.0

\$85 per user

Complete encryption and protection for data stored on mobile devices and storage media

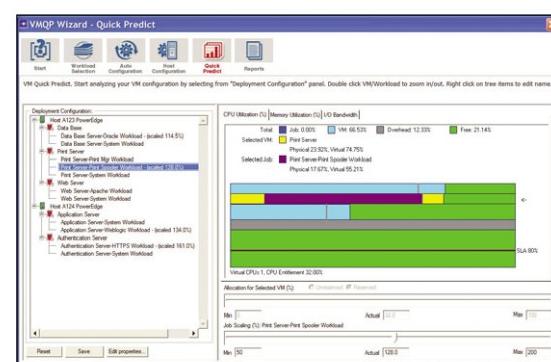
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Gauge Consolidation, Virtualization Impact

OPNET IT Guru Systems Planner 14.5 Eliminates Guesswork



IT Guru Systems Planner VMQP shows workloads of current servers to help you predict if virtualization will benefit your enterprise.

IN A TIME WHEN industry analysts and experts are regularly citing the high rate at which enterprises are adopting server virtualization, OPNET Technologies has released a new tool to assist enterprises in such transitions. VMQP (Virtual Machine Quick Predict) gives IT qualified information it can use to make decisions and investments related to virtualization.

Introduced as a new feature within OPNET's IT Guru Systems Planner 14.5—an application designed to help manage systems capacity planning across physical and virtual servers—VMQP estimates the impact server consolidation and virtualization will have on performance.

VMQP provides guided workflows that help surmise server workloads to predict

if virtualization will more efficiently utilize resources. Using simulation-based analysis that takes into consideration applications already in use, as well as user volumes, VMQP automatically determines the capacity needed for the host server and virtual machines.

IT Guru Systems Planner integrates with OPNET's ACE and IT Guru Network Planner applications, providing users end-to-end capacity planning and performance-management information and tools. The software also integrates third-party monitoring tools for server performance that assist companies in accurately planning server capacity in terms of support growth, server consolidation, and application deployment.

OPNET Technologies IT Guru Systems Planner 14.5

Helps manage systems capacity planning across physical and virtual servers; a new feature estimates the impact of server consolidation and virtualization

(240) 497-3000

www.opnet.com



Security For The Virtual Realm

Catbird's HypervisorShield Guards Against Attacks

VIRTUAL INFRASTRUCTURES need the same level of security that companies use to secure their physical networks. However, today's endpoint security mechanisms can't secure the virtual infrastructure because they can't detect the threats that could compromise security. To aid in closing the security gap created by virtualization, Catbird launched HypervisorShield.

As a way of proactively securing virtualization deployments, HypervisorShield can continuously monitor the precise vulnerabilities, known attack signatures, and guest machine access of the hypervisor management network. A component of Catbird's V-Security, HypervisorShield is a group of settings that protects the hypervisor. Users can customize security for

all parts of their company's network by selecting standard or custom settings.

Features of HypervisorShield include the ability to monitor and control access to the hypervisor network, detect malicious network activity directed at the hypervisor from virtual machines, and validate the secure configuration of hypervisor network services.

Because protection is delivered within the virtual network itself using Catbird's V-Agent virtual appliance, HypervisorShield can see inside the hypervisor. By monitoring from the inside, companies receive coverage that is more effective than other security offerings. Also, administrators do not need to reroute traffic onto the physical network for validation.

HypervisorShield's network access control monitors and quarantines for unauthorized devices on the management network. This provides automatic protection against inadvertent management error and malicious attacks.

Catbird HypervisorShield

Included as part of the Catbird V-Security package (\$3,250 per VMware Host, plus \$650 per year, or subscription pricing of \$18/month per VM)

Guards against unauthorized hypervisor network access and attack

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Know Your Equipment

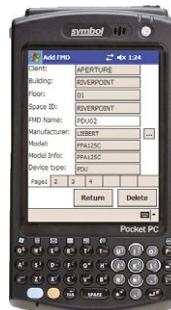
Aperture VISTA Data Capture Handheld Simplifies Asset Tracking

CAPTURING DATA ON equipment configuration and physical resources is no small task. That's why Aperture created VISTA Data Capture Handheld for use with its data center management system, Aperture VISTA. This handheld and software makes it possible for data center administrators to cost-effectively, accurately, and predictably collect detailed information about the equipment and resources in the data center.

Tracking details about the equipment an organization owns, where it is located, and what it is

connected to is difficult. Traditionally, companies would send staff into the data center to record this information on paper and re-enter it into the computer later. This process is error-prone and time-consuming. The VISTA Data Capture Handheld helps to eliminate those data entry errors and gives organizations the ability to easily collect the data they need and upload it into Aperture VISTA.

The Aperture VISTA Data Capture Handheld includes the VISTA Data Capture Application



installed on a Windows Mobile device. Using this combination of hardware and software, organizations can allow Aperture Certified Partners to collect data in their data centers for uploading into Aperture VISTA, or a company can capture data itself using training and certification from Aperture. Regardless of the method of collection, Aperture's Data Services organization performs final validation.

While capturing data, the handheld can read existing barcode asset tags or can help with the configuration of new ones. To increase accuracy, the handheld uses Aperture's reference library of vendor equipment to validate data as it is entered; collision checking ensures that floor-placed devices don't overlap each other.

Aperture VISTA Data Capture Handheld

About \$5,000 per device

Quickly and accurately collect valuable data center information for use with Aperture VISTA

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www.aperture.com



Assault On Data Center Dilemmas

Verari's BladeRack 2 XL Provides Dense Processing, Storage, Or Both



Consolidation in the data center becomes tantalizingly possible with Verari's BladeRack 2 XL.

Verari says a single rack could hold up to 96 processing cores and 576TB of storage when configured for a typical Web 2.0 server application.

Verari's Vertical Cooling Technology is a crucial piece of the puzzle when a system boasts the density of the BladeRack 2 XL. Without the superb ventilation Vertical Cooling Technology provides, hard drive life would be shortened and processing speed would suffer, as thermal overloads would induce CPUs to throttle their speeds to reduce heat dissipation. Without Vertical Cooling Technology, the BladeRack 2 XL's space-saving design would become a liability in the performance and reliability columns.

Despite its high density and power efficiency, the XL is the low-cost member of the BladeRack 2 X-series family. It leaves out redundant power support and uses a less robust IPMI management system instead of VCC. However, the XL features the option to use addressable power strips, unlike the rest of the X-series.

DATA CENTERS want the energy efficiency and high density blade servers can provide. The less power and space consumed by storage and processing hardware, the better, assuming capacity and throughput aren't compromised.

Verari Systems is dedicated to this ideal. The company's new BladeRack 2 XL computing and storage platform features 85% or greater power efficiency (with 208VAC input) and support for 200 to 240VAC power.

The system supports up to 72 blades and up to 144 servers on double server nodes. Computing and storage blades can be intermixed. The maximum processor core count for the BladeRack 2 XL is 576. Alternatively, when used strictly for storage, its max capacity using 3.5-inch drives is 672TB per rack.

Verari Systems BladeRack 2 XL

Starts at less than \$100,000 fully populated

Data consolidation platform offering flexibility and power in a small footprint

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www.verari.com



Single Console, Simple Management

Sun xVM Ops Center Works With All Assets, Regardless Of OS Or Platform



Use the Sun xVM Ops Center to deploy routine administration tasks.

MANAGING SERVERS, networks, and storage becomes more complicated as organizations move toward virtualization. That's why Sun developed its Sun xVM Ops Center, a scalable data center automation tool that operates from a single console.

Sun xVM Ops Center's enterprise-grade components, openness, and interoperability distinguish it from its competitors. Regardless of the OS or hardware platform, the program deploys routine administration tasks such as firmware updates, bare-metal OS provisioning, patching, and updating. It includes a current view of the system state, patch status,

and software portfolio, so you can get quick, precise reporting and compliance validation.

The program features server discovery, inventory management, and firmware and bare-metal server provisioning. It's able to scan and find servers across a network and also offers automatic installation of bare-metal OSes, RPMs, and firmware. Sun xVM Ops Center improves patch and update management, minimizing downtime for Red Hat, SuSE, and Solaris. Sun xVM Ops Center can also watch parameters and resolve problems, resulting in secure and remote control of users and data center resources.

Sun xVM Ops Center

Satellite server costs \$10,000 (annual subscription) and \$100 to \$350 per year per managed server

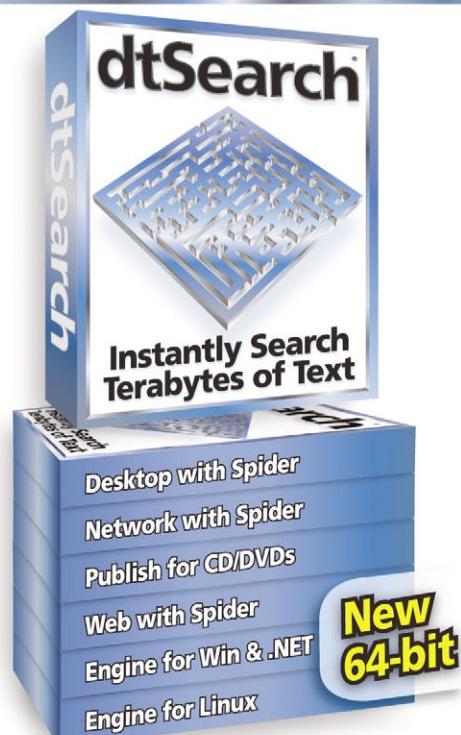
Highly scalable data center automation tool that operates from a single console

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American Portwell NAR-5520
Features Server-Class Performance, Compact Size



TODAY'S ENTERPRISES face increasing pressure to implement products that ensure high computing power and low energy consumption, all while keeping the price in check. Those factors are especially important when it comes to mission-critical applications such as network security and firewalls.

American Portwell had those issues in mind when developing its NAR-5520 communications/network security platform. The NAR-5520 1U CA platform is designed for enterprise network security, firewall, WAN optimization, antivirus server, unified threat management,

American Portwell NAR-5520

A communications/network security platform designed for enterprise network security, firewall, WAN optimization, and other scenarios

(877) 278-8899

www.portwell.com

 Portwell

media gateway, and triple-play broadcasting setups.

The Portwell product uses the Intel 945G chipset with 1066/800/533MHz FSB, so it can run LGA775 socket processors, including single- and dual-core CPUs such as the Intel Core 2 Duo, Celeron D, Pentium D, and Pentium 4. The integrated system fits within a 1U chassis while still allowing the use of 3.5-inch hard disk drives and/or a removable hard drive by using the optional project base.

American Portwell created the NAR-5520 to be easy to install, use, and maintain, with a load factory default mechanism. It features front access Gigabit LAN ports for user-friendly maintenance and a 2x16 LCD module with four buttons for easy installation and operation. LEDs indicate power status, data access, Ethernet status and speed, and bypass status.

Other features include:

- Up to 10 Gigabit Ethernet ports with two built-in bypass segments (six standard)
- Up to 4GB DDR2 667/533/400 RAM
- Two optional PCI expansion slots
- One 3.5-inch hard disk drive (up to two can be installed)
- Optional crypto solution
- One front-accessible RJ45 console connector



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